Univ. of
Toronto
Library

THE

CANADIAN JOURNAL

OF

MEDICINE AND SURGERY

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

J. J. CASSIDY, M.D., EDITOR.

VOL. XXVII.

JANUARY TO JUNE, 1910

1185-95
9/11

BUSINESS MANAGER
W. A. YOUNG, M.D., L.R.C.P. (LOND.),
145 COLLEGE ST., TORONTO, CAN.
1910

INDEX TO VOLUME XXVII

January

ORIGINAL CONTRIBUTIONS.

Sarcoma of the Nose, with Presentation of Cases. By J. Price-Brown 1
Artificial Light and its Effects Upon the Eye. By James M. MacCallum, M.D. 21
School Hygiene 30

EDITORIALS.

The Statutory Membership of the College of Physicians and Surgeons of Ontario 33
Medicinal Treatment of Subacute and Chronic Gout 37
Why are not Toronto Schools Medically Inspected? 39
Special Meeting of the Ontario Medical Council 42
Further Accessions to our Staff .. 44
A Suffragist Entertained by the Woman's Medical Alumni 45
Editorial Notes 46
Correspondence 52

SOCIETY PROCEEDINGS.

The Academy of Medicine 55

NEWS OF THE MONTH.

Retirement of Miss Snively After 25 Years of Splendid Service 60
Was Vote Legal by the Doctors? .. 61
Canadian Women Doctors 62
Items 63

PHYSICIAN'S LIBRARY.

A System of Ophthalmic Therapeutics. By Casey A. Wood, M.D. 66
Soured Milk and Pure Cultures of Lactic Acid Bacilli in the Treatment of Disease. By George Herschel, M.D. 67
Clinical Memoranda for General Practitioners. By Alex. Theodore Brand, M.D. 68
Text-Book of Modern Materia Medica and Therapeutics. By A. A. Stevens, M.D. 68

February

ORIGINAL CONTRIBUTIONS.

The Radical Mastoid Operation and its Technique. By D. J. Gibb Wishart, M.D. 69
Medicine Versus a Criminal Act. By John Hunter, M.B., Toronto 77
The Stimulant Group. By William F. Waugh, M.D., Chicago 82
The Indeterminate Sentence and Parole System. By Dr. J. T. Gilmour, Warden Central Prison 86
Society Proceedings 89
Abstract 91

EDITORIALS.

The Colon Tube 93
Laymen Rival Doctors in the Campaign Against Tuberculosis .. 94
Copper in Vegetables 97
"Call it Six Days." 99
Editorial Notes 102
Personal 110

OBITUARY.

The Death of Dr. James H. Richardson 111
Death of Dr. Uzziel Ogden 114
Death of Dr. G. F. Cleland 115

NEWS OF THE MONTH.

The Clifton Springs Sanitarium ... 116
The Peters' Scholarship 117
The Borderland Between Medicine and Surgery 118
Items of Interest 118

BOOK REVIEWS.

Northern Lights. By Sir Gilbert Parker 119
Diseases of the Pharynx and Larynx. By Dr. E. J. Moure 119
Hydrotherapy. By William H. Dieffenbach, M.D. 120
Quain's Elements of Anatomy. By E. A. Schaffer and J. Symington 121
Practical Microscopy. By F. Shillington Scales, M.A., B.C. 121
Formulaire des Medications Nouvelles pour 1909. Par le Dr. H. Gillet 122
The Relation of Medicine to Philosophy. By Dr. R. O. Moon ... 123
Manual of the Diseases of the Eye. By Charles H. May, M.D. 123
Outlines of Bacteriology By David Ellis, Ph.D., D.Sc. 124
Clinical Studies for Nurses. By Charlotte A. Aikens 125
The Practical Medicine Series. Edited by Joseph B. De Lee 125
A System of Ophthalmic Therapeutics. Edited and chiefly written by Casey A. Wood, M.D. 126
A Text-Book of Physiological Chemistry. By John H. Long, ... 126
High Frequency Currents. By H. Evelyn Crook, M.D. 127
Legal Medicine and Toxicology. By R. L. Emerson 127
The Morphia Habit and its Voluntary Renunciation. By Oscar Jennings, M.D.. 128
The Practical Medicine Series. Edited by Gustavus P. Head, M.D. 129
Medical Libraries 129
Clinical Examination of the Urine and Urinary Diagnosis. By J. Bergen Ogden, M.D. 130
Surgical Diagnosis. By Daniel Eisendrath, A.B., M.D. 130
Dietetics for Nurses. By Julius Friedenwald, M.D. 131
Congenital Dislocation of the Hip Joint. By J. Jackson Clarke .. 131
Insomnia and Nerve Strain. By Henry S. Upson, M.D. 132
A Manual of Venereal Diseases. By Officers of Royal Army Medical Corps 133
Diseases of the Male Generative Organs. By Edred M. Corner. 133
Auscultation and Percussion. By Samuel Gee, F.R.C.P. 134
The Open-Air or Sanatorium Treatment of Pulmonary Tuberculosis. By F. Rufenacht Walters, M.D. 134
The Practical Medicine Series. Edited by George F. Butler, M.D. 135
Aids to Microscopic Diagnosis. By E. Blake Knox 136

R
11
C38
v.27

March

ORIGINAL CONTRIBUTIONS.

The Borderland of Medicine and Surgery. By Maurice H. Richardson, M.D. 137
Radium Therapy. By Herbert A. Bruce, M.D., F.R.C.S. 166
Public Health in the West 174

EDITORIALS.

The Expenses of the Faculty of Medicine of the University of Toronto 177
Forced Feeding in Tuberculosis .. 180
The Slaughter of the Innocents.... 182
The New Toronto General Hospital. 184
Editorial Notes 191

THE PHYSICIAN'S LIBRARY.

Physical Examination of Surgical Cases. By E. Stanley Ryerson, M.D., C.M. 197
The Treatment of Diseases in Children. By G. A. Sutherland, M.D., F.R.C.P. 197
Pulmonary Tuberculosis and Sanatorium Treatment. By C. Muthu, M.D., M.R.C.S. 198
The Physician's Pocket Account Book. By J. J. Taylor, M.D. .. 198
A Text-Book of Obstetrics. By Barton Cooke Hirst, M.D. 199
Principles of Hygiene. By D. H. Bergey, M.D. 199
A Manual of Midwifery. By Henry Jellett, B.A., M.D. 200
The Skin Affections of Childhood. By H. G. Adamson, M.D. 202
The Practical Medicine Series. 202
A Text-Book on the Practice of Gynecology. By W. Easterly Ashton, M.D., LL.D. 203
Practical Anesthetics. By H. Edmund G. Boyle, M.R.C.S. 204
A Manual of Normal Histology and Organography. By Chas. Hill, Ph.D., M.D. 204

April

ORIGINAL CONTRIBUTIONS.

Treatment of Hernia in Children. By Chas. B. Shuttleworth, M.D. 205

EDITORIALS.

The Winter March of the Royal Canadian Horse Artillery 210
Are Fomites Productive of Contagious Diseases? 214
The Galvano-Cautery in the Treatment of Malignant Growths... 216
How Long will it be Before the College of Physicians and Surgeons is Bankrupt? 219
The Rabies Outbreak 222
The Downey Tuberculosis Bill 226
Amendments to the Ontario Medical Act, Proposed by the Academy of Medicine 228
Editorial Notes.. 229
Personal 237
Correspondence 238

NEWS OF THE MONTH.

The Canadian Hospital Association 242
Dr. Luther Gulick, of New York, on Medical Inspection of Schools. 242
McGill University Faculty of Medicine 244

THE PHYSICIAN'S LIBRARY.

The Sexual Question. By Auguat Forel 245
Fifth Annual Report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis 246
The Practice of Surgery. By the late Walter George Spencer.. 247
The Practical Medicine Series. Edited by Drs. E. C. Dudley and C Von Bachelle 248
Manual of Operative Surgery. By John Fairbairn Binnie 249
Studies in Tuberculosis. By Henry Clarke 249
La Cure Radicale de la Hernie Inguinale 250
Dose-Book and Prescription-Writing. By E. Q. Thornton 250
Medical Diagnosis. By Charles Lyman Green, M.D. 251
A Synopsis of Surgery. By Ernest W. Hey Groves, M.D. 252
A Compend of Histology. By Henry Erdmann Radasch, M.D. 252
The Prevention and Treatment of Abortion. By Frederick J. Taussig, A.B., M.D. 253
Prostatic Enlargement. By Cuthbert S. Wallace, M.B., B.S. 254
Surgery of the Brain and Spinal Cord. By Prof. Fedor Krause. 254
Examination of the Urine. By G. A. De Santos Saxe, M.D. 255
An English Handbook to the Paris Medical School. By A. A. Warden, M.D. 256
Living Anatomy and Pathology. By Thomas Morgan Potch, M.D. . 256
Modern Astronomy. By Herbert Hall Turner, F.R.S. 257
Medical Lectures and Clinical Aphorisms. Samuel Gee, M.D. 257
A Practical Guide to the Administration of Anesthetics. By R. J. Probyn-Williams, M.D. 258
Ophthalmic Surgery. By Charles H. Beard, M.D. 258
A Text-Book Upon the Pathogenic Bacteria. By Joseph McFarland, M.D. 259
Text-Book of Medical and Pharmaceutical Chemistry. By Elias H. Bartley 259
Biographic Clinics. By George M. Gould, M.D. 260
Atlas of External Diseases of the Eye. By Dr. Richard Greeff... 260
Electricity for General Practice. By F. Stewart Povah and F. Davidson 260
Treasures of Truth. By George F. Butler 261
Surgery. Its Principles and Practice. Edited by W. W. Keen, M.D. 261
A Text Book of Physiology. By William H. Howell, Ph.D., M.D. .. 262
A Handbook of the Diseases of the Nose, Throat and Ear. By Eugene S. Yonge, M.D. 263
A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D 263
The Practical Medicine Series. Edited by W. L. Baum, M.D., Harold N. Moyer, M.D. 264
Exercise in Education and Medicine By R. Tait McKenzie, M.D. 264

Dorland's American Illustrated Medical Dictionary. By W. A. Newman Dorland, M.D. 265
Clinical Lectures and Addresses on Surgery. By C. B. Lockwood.. 266
Practical Points in the use of X-ray and High-Frequency Currents. By Aspinwall Judd, M.D. 267
Oxford Medical Publications. By Edred M. Corner, M.A. 268
Nervous and Mental Diseases. By Hugh T. Patrick and Charles L. Mix 269
Medical Gynecology. By Samuel Wyllis Bandler, M.D. 269
Surgical Emergencies. By Percy Sargent, M.A. 270
Age Incidence, Sex and Comparative Frequency in Disease. By James Grant Andrew 271

May

ORIGINAL CONTRIBUTIONS.

Electrocardiography and Electrophonography as Aids in Clinical Diagnosis. By Lewellys F. Barker, M.D. 273
Nursing People of Moderate Means and the Poorer Classes. By John N. Elliott Brown 287
A Test for the Diagnosis of General Paralysis of the Insane. By George W. Ross, Jr., M.D., Toronto 297

EDITORIALS.

A Vegetarian Diet Useful in Gout and Bright's Disease 305
The Paper Milk Bottle 307
The Causes of Appendicitis 309
"We All Think That Is Not As It Should Be" 312
An Impertinence 316
The Retiring Medical Health Officer. 317
The Academy of Medicine Elections. 318
"Toronto Jail a Health Resort" 319
Editorial Notes 321
Personals 325

SELECTED ARTICLES.

Romance of a Gold-Headed Cane ... 327

CORRESPONDENCE.

The 1910 Meeting of the British Medical Association 332
Who Has Treated Progressive Muscular Atrophy Successfully? ... 333

NEWS OF THE MONTH.

Opening of the New Tuberculosis Sanitorium at London, Ontario. 334
Canadian Medical Association 336
The Canadian Association for the Prevention of Tuberculosis 337
Presentation to the Academy of Medicine 338

THE PHYSICIAN'S LIBRARY.

Diagnostic Therapeutics. By Albert Abrams, A.M., M.D. (Heidelberg) 339
Handbook of Diseases of the Ear. By Richard Lake, F.R.C.S. 340

June

ORIGINAL CONTRIBUTIONS.

The Differential Diagnosis of Cerebellar Tumours. By Ernest Jones, M.D. 341
Gallstones. By Dr. J. M. Rogers, Ingersoll, Ont. 350

SOCIETY PROCEEDINGS.

The Canadian Medical Association. 359
The American Medical Editor's Association 364

EDITORIALS.

Hemorrhagic Diseases of the New Born 367
The Orphanages of Ontario 370
The Hospitals of Ontario 373
Why are the Autos of Physicians "held up" daily by the Police? 375
A Little Embarrassing, Don't you Know? 379
Four Thousand a Year for a Medical Health Officer. Ten Thousand a Year for a City Counsel. 382
Dr. Charles Hodgetts Joins the Federal Service 383
Editorial Notes 384
Personals 389
Correspondence 390

OBITUARY.

Death of Dr. John D. Wilson, of London, Ont. 394

NEWS OF THE MONTH.

A Large Deputation of Medical Men Wait Upon the Board of Control 395
The Academy of Medicine Elections. 395
Annals of Medical Practice Purchased by the New England Medical Journal 396

BOOK REVIEWS.

The Practice of Osteopathy. By Charles H. Murray 397
Emergency Surgery. By John W. Sluss, A.M., M.D. 397
Functional Nervous Disorders in Childhood. By Leonard G. Guthrie, M.A., M.D. 397
Spondylotherapy. By Albert Abrams, A.M., M.D. 399
Claims Arising from Results of Personal Injuries. By W. Edward Magruder, M.D. 399
Modern Surgery: General and Operative. By J. Chalmers DaCosta. M.D. 400
Myomata of the Uterus. By Howard A. Kelly, M.D. 401
Diseases of the Nose. By Ernest B. Waggett, M.A., M.B. 402
Heart Disease and Thoracic Aneurysm. By L. J. Poynton, M.D. 402
Diseases of the Larynx. By Harold Barwell, M. B. 403

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXVII. TORONTO, JANUARY, 1910 No. 1

Original Contributions

SARCOMA OF THE NOSE, WITH PRESENTATION OF CASES

BY J. PRICE-BROWN.

Fellow of the American Laryngological Association, Toronto Academy of Medicine, etc.

Western Hospital Clinic, Nov. 18, 1909. Discussions by Professors Wishart, Anderson and Primrose, of Toronto University, and others. Dr. A. A. MacDonald, Dean of the staff, in the chair.

Ladies and Gentlemen: It gives me great pleasure to preside at this particular meeting of the Clinical Society of the Toronto Western Hospital, as we are to have a communication from one of the members of our staff, showing the outcome of years of study and experience, and reporting results far in advance of the accepted theories of the day.

We have heard, from time to time, of the exceptional success obtained by Dr. Price-Brown, with his method of treating nasal sarcoma, but to-day he is to give us, not only step by step, the means by which the ends have been attained, but also the concrete results.

He has fortified his strong position by having had confirmation of the diagnosis by able clinicians, and pathologists, and

now he exhibits to you three patients, giving you the opportunity of judging the results for yourselves.

Whilst introducing Dr. Price-Brown, it is not the place of the chairman to say more than to congratulate him on his excellent work and to invite the closest examination and fullest criticism.

Dr. J. Price-Brown spoke as follows:

Fortunately for mankind sarcoma of the nose is a rare disease. Its malignancy has made it the dread of the surgeon as well as the patient. Medical treatment as a curative agent is acknowledged to be futile, and surgical treatment has been almost as unfortunate in its results.

To prove that this is the expression of modern thought I need only refer to the works of some of the leading writers of the day, men who are specialists, and, some of them, prominent teachers in the field of rhinology.

Lennox Browne, in his most recent edition upon diseases of the nose and throat said that when the sarcoma affects the upper region of the nose no operation is advisable; when the lower region is affected, Ollier's or Rouge's *may* be attempted. He does not say they *should* be.

Bosworth, after quoting a large number of cases in which operation had been done, says that it would appear that one half the cases are cured, but that the statement is not trustworthy, as many of them were reported from one to four months after operation, while in others time was altogether ignored, rendering the statistics unreliable.

Boylan reports ten cures out of seventeen cases, but nearly all of them were reported within a few months of operation.

Shurly, Porter, and Bliss each report two cases, none of which recovered.

Kyle says that prognosis is always grave. Early and complete removal is the only hope, and the only instruments he advocates in purely nasal sarcoma are the galvano-cautery and curette.

Richards, in his article upon nasal sarcoma, says when it affects the ethmoid, the only region he refers to, "that we are positively helpless, and can only watch the fatal issue." He had four cases, two children and two adults: all died.

Bishop says it is a rapidly fatal disease of less than a year's duration.

Coakley, in his issue of 1908, says if the sarcoma is small it may be removed at one sitting by the electro-cautery snare, or if large by several distinct operations, the base being always cauterised. Prognosis, he says, should always be guarded, as recurrence, when least looked for, is likely to follow.

And lastly, Packard, of Philadelphia, in his new text-book upon the nose, throat, and ear, only just published, says (I quote his own words): "The prognosis of sarcoma of the nose is extremely bad. If removed it has a strong tendency to early recurrence. The only satisfactory treatment is thorough extirpation of the neoplasm as early as possible. For this purpose it is generally necessary to perform an external operation, intranasal operations not affording sufficient room for thorough removal."

In the light of such a record from leading specialists of this new century it looks like temerity to say anything more. But the last word has not been said, nor will it be for many years to come; and I ask for a few minutes' earnest and candid consideration of the subject.

Six years ago I reported at the American Laryngological Association at Washington the history of three cases. All of them had exhibited the usual classical symptoms: continued obstructive growth, repeated hemorrhages, etc. All had been previously operated on by other men. All had been of long standing, and the diagnosis was in each case sustained by pathologists after careful examination of sections removed. Two of them were then reported as cured. The third still under treatment was reported as follows:

On Oct. 31, 1902, Mr. L. R. P., aged 21 years, presented himself at my office. On examination I found a large growth, which completely filled the left nasal cavity. It distended the nostril, flattening that side and producing partial frog-face. Posteriorly it filled the post-nasal cavity, pressing the soft palate downward, and rendering it rigid and immovable. The lower part of the left cheek was also protuberant and pendulous, although not diseased. The septum was pressed over to the right by the growth, so that nasal respiration was impossible.

The tumor was of a pinkish color, particularly at the posterior end, and was smooth, glistening and firm. The sense of smell was entirely absent.

Physically he was well nourished and of a plethoric color. There was neither glandular enlargement nor pain; but there was very great distress, accompanied by a full bursting sensation.

As the growth had been pronounced sarcoma after microscopical examination by a competent authority two and a half years ago, and as excision by external operation was said to be the only possible method of relief, and even that would be accompanied by great danger from hemorrhage; it was not without a good deal of trepidation, and thoroughly explaining the risk to the patient and friends, that I was willing to take charge of the case.

Careful examination impressed me with the fact that it was not an osteo-sarcoma; but that it had its origin in the soft parts, and that any existing affection of the bony framework would probably be in the form of absorption. The tumor, however, was so enormous, and the history so hemorrhagic, that I believed it to be inoperable by regular surgical excision.

Still my experience, from the history of the two cases already reported gave me confidence, and I was willing to attempt its removal by intranasal operative means; particularly as the patient and his immediate relatives were desirous that I should do so, after I had fully explained to them the risk.

The first attempt at treatment was on Nov. 13th, 1902, Dr. Wilson kindly assisting. The application of a solution of cocaine, followed by a 1 in 2,000 of adrenalin, rendered the anterior end of the tumor pallid. The idea was to remove several segments if possible by snare. It was found, however. that although the loop would slide in between the nasal wall and the side of the tumor, the latter was so round and dense that but slight hold could be obtained, and little else but mucous membrane came away. Still the hemorrhage was so severe that the nose had to be plugged tightly at once.

Several days elapsed before all the tampons could be removed, consequently, operating did not really commence until Nov. 18.

From that date until Feb. 2, when an operation under chloroform was done, of which I will speak later, I removed 12 pieces of the growth by means either of the snare or scissors: and operated upon it also 49 times with the electro-cautery. Before each cautery operation I sprayed the nasal cavity out with an alkaline solution, and then removed the sloughs occasioned by the previous operation with forceps. A large number of these I kept preserved in alcohol and here they are.

By the date mentioned, or ten weeks after commencement, the great body of the tumor had been removed. But there was still a large piece attached to the vault of the left side of the naso-pharynx and posterior end of the septum. I tried several times to get a loop upon it, but the patient could not bear my fingers behind the palate to adjust the snare.

The result was that on Feb. 2nd I decided to operate under general anesthesia. Dr. Gullen kindly administered chloroform. A mouth gag was inserted. I passed a screw snare through the nose to the naso-pharynx with the right hand, and with the fingers of the left in the naso-pharynx adjusted it in position around the base of the tumor. Dr. Gullen then turned the screw until the hold was secure, after which the screw was tightened by degrees until the growth was cut off and drawn into the nose. where it acted as a plug, the snare separating from it. The hemorrhage was excessively severe, and the gag being still in the patient's mouth, I pressed in behind the palate a number of large wads of absorbent cotton, completely filling the cavity and retaining pressure for some time with my hand.

Quarter of an hour later, after hemorrhage had ceased, the piece was pulled out of the nasal cavity with forceps. Here it is. When fresh it weighed nearly three drams, and, as you will notice, the base was nearly as large in every direction as the diameter of the tumor itself.

Between the time of this operation under chloroform and two and three-quarter years ago, I had many other electro-cautery operations upon parts of the tumor and regrowths. These have been chiefly in the posterior turbinal region. Since Feb. 1907, there has been no return whatever of the growth and he is one of the patients that I now show.

There is one point of interest in this case that it may be well

to touch upon, the attachment of the tumor. It was immensely sessile, as sarcoma of the nose usually is, and was attached to the whole length of the left inferior and middle turbinal regions and the posterior part of the vault above. The attachment extended over the upper part of the left palate bone, the body of the sphenoid, the inner surface of the internal plate of the pterygoid, and the posterior end of the vomer. The bone of the inferior turbinal had been entirely absorbed, and the greater part of the middle turbinal; also a portion of the face of the body of the sphenoid; for instead of the ordinary openings into the sphenoidal sinus, there is now a large perpendicular oval opening, which in all likelihood was made by pressure absorption.

To-day all three men are perfectly well and are following their usual vocations as bread-winners for their families in the city of Toronto. It is 14 years since the last operation on the first case, and it is 8 years since the last operation on the second case, and it is 2¾ years since the last operation on the third case.

Case 4.—In the December issue of *The Annals of Otology,* 1906, I reported my next case. The patient was a butcher, aged fifty-eight. His father died of cancer of the stomach at the age of seventy-two. On examination I found the left nasal passage from anterior to posterior naris filled with a dense growth which bled on being touched. Microscopical examination of a pathological specimen removed, indicated that it was a round-celled sarcoma. The growth was from the outer wall, the middle and inferior turbinals being involved and softened. In two weeks the tumor was entirely removed by electro-cautery operations. At the end of that time the nasal passage was cleared of all obstruction and there was complete restoration of normal breathing through the nostril.

His temperature when he first presented himself was 99.4° F., and it continued more or less elevated throughout the treatment, running between 99° and 102° F. As the operations drew to a close septic symptoms developed. He lingered about two months and then succumbed to the absorption of toxins from the site of the tumor and a diseased antrum. There was, however, no return of the sarcoma, nor even of inflammatory

vegetations, and both the patient and his friends were spared the horrible and repulsive deformity which usually attends death from this disease.

The following three cases were reported to the American Laryngological Association at Boston five months ago, two of them being still under treatment.

On April 1, 1909, Dr. Kerr, of Toronto, referred the first of these:

Case 5.—Mr. C. C——, aged thirty-five. General health and family history good. Bachelor, and weaver by trade. For several months closure of the left nasal passage had been developing, resulting in complete stenosis, even of the right side. Taste and smell had been lost, and the voice had a thick nasal twang.

Examination.—Left nasal passage packed with a red, fleshy growth which bled on being touched. The tumor was sessile, being attached to the triangular cartilage in front and the vomer behind. It did not project into the naso-pharynx. I removed a section by knife and submitted it to two pathologists. Their report was:

"The microscopical examination, together with the clinical history, incline us to believe that the growth is a small, round-celled sarcoma.

"(*Signed*) Geo. H. Carveth,
" L. A. Davis."

Electro-cautery operations were at once commenced and repeated almost daily for two weeks, the passage being freed from sloughs before each succeeding operation. By that time the tumor was fully removed, the posterior portion of the cartilaginous septum and part of the vomer having been sacrificed to help to accomplish that end. The nasal passage was quite free, the breathing had become normal again, and the sense of smell had returned. This is another of the patients shown to-day. It is seven months since operation. No return.

Case 6.—On April 9, 1909, Mr. W. S. ——, aged twenty, was referred by Dr. Nichol, of Cookstown. For more than two years he had suffered from a constantly increasing growth in the right nasal passage, with the loss of both taste and smell. Nine months ago, the stenosis having become complete, he was

referred to a surgeon. From then until now, at different times. segments of the growth have been removed, each operation being attended by excessive hemorrhage. As the tumor continued to increase in size he was finally brought to me by his family physician and placed in the Toronto Western Hospital for treatment.

I found complete occlusion of the right nasal passage extending low down into the naso-pharynx. The slightest touch caused bleeding, yet the hardness within the nasal passage was so dense that on first examination I thought it was partly due to a cartilaginous and bony ridge of the septum, which, after a free application of cocaine and adrenalin, I attempted to remove with a saw. But instead of cartilage and bone the instrument simply removed a mass of tissue, pathological examination of which brought out the following report:

"We find that this is an angeio-sarcoma, composed of small round cells in a fibrous reticulum, having in it large and numerous blood-vessels with thin walls. Myxomatous degeneration is found in places. "(*Signed*) L. A. Davis,

" Geo. H. Carveth."

Two days later the tampons were removed and electro-cautery operations commenced. While under treatment an acute pericapsular abscess of the left ankle formed, which, after being operated upon on both sides, healed. This interrupted the electro-cautery operations, and they were suspended from April 15 to 29, when they were resumed. The rule was to cleanse the nasal cavity each morning, removing all loose sloughs, to anesthetise it with cocaine and adrenalin, and then to cauterise as much of the growth as was deemed advisable. This would be followed by an evening cleansing of the passage. the routine being carried out each day.

By May 18 the nasal passage was free right through to the posterior naris, and the post-nasal segment of the growth was freely incised with the cautery through the nose. On this day chloroform was administered, and a large portion of the balance of the tumor was removed through the mouth by means of a modified Lowenberg's forceps. The attachment was to the anterior part of the roof of the naso-pharynx, to the septum and to the upper side of the soft palate.

From then until the latter part of June I used the electro-cautery at least a score of times, burning away fragments of the growth and thoroughly cauterising the base of the pedicle. These were all done by means of a strong light through the nasal passage. Once, also I used the post-nasal curette. By this time the tumor was entirely removed. There were in all, besides saw, forceps and curette operations, forty-five applications of the electro-cautery knife. The spray used was one of simple albolene, and on going home the patient was instructed to continue to use it until the crust formation and catarrhal symptoms were over. He returned to his home in Muskoka five months ago. Two months later under my instruction he came back for examination. I found recurrence in the upper and back part of the passage in the ethmoidal region. For some days electro-cautery treatment was resumed, the growth was cleaned out completely and he again went home. Under orders he came back a month ago. But there was no return. He is now working in the lumber woods but will return at Christmas for another examination.

Case 7.—On April 12, 1909, three days after receiving the last case, Dr. W. M. Brown, of Neustadt, brought to me Mr. E. W——, aged eighteen, for treatment. This case was similar to, though in some respects more serious than the one just described. For several years the left nasal cavity had been filled with a similar growth extending into the naso-pharynx. In the latter it was much larger than in the case of Mr. S——. During the last two years he had undergone many operations by snare, forceps, and cautery, each one being attended by violent hemorrhage.

Examination.—Breathing on either side impossible. Left passage filled by a growth which presented a red, globular form half an inch within the nostril. The right side narrow, and filled with pus. The post-pharynx was completely filled by a large globular mass.

The lad was placed in the Toronto Western Hospital.

The treatment was on similar lines to all those that had preceded it. In this case, however, there was no preliminary cutting away of a specimen for examination. This was deferred until later.

Daily cauterisations were at once commenced, the main object being to reduce the size of the tumor as safely and speedily as possible—*per vias naturales.* The attacks were made under cocaine and adrenalin upon the central part of the growth in the nostril, leaving the shrinking shell as a protection to the normal tissues. Consequently, although the sittings were long and tedious to the operator, they produced little pain in the patient. Little by little the heart was eaten out of the nasal portion of the tumor, and the naso-pharynx was reached. In the meantime I had discovered that the attachment was to the middle turbinal and upper end of the septum and adjoining naso-pharynx; and like the former case, there was also a wide adhesion to the soft palate.

On the thirtieth day of treatment chloroform was given, and the large body removed from the naso-pharynx with cutting forceps. Bleeding was so severe that post-nasal packing had to be done. Two days later this was removed. Then on examination I discovered a piece of the tumor still attached to the post-pharyngeal wall immediately behind the left posterior pillar. It had the appearance of a hard, misplaced uvula. Another segment was in the posterior part of the nasal cavity, and was attached to the middle turbinal, the posterior ethmoid cells, and the summit of the septum. These, together with many other spots, were removed by electro-cautery, the operative treatment being still necessary for several weeks.

On removal of the post-nasal portion of the tumor a pathological examination was made by Professor Anderson, of the University of Toronto, who gave the following report:

"I have examined the specimen of tissue from the naso-pharynx and consider the condition to be that of myxo-sarcoma. The myxomatous tissue, forming a considerable part of the growth, is exceedingly vascular; the vessels as a rule have poorly developed walls. In different areas of the growth there are masses of small round cells. The condition I believe is one of sarcomatous transformation of a myxomatous tissue.

"(*Signed*) H. B. Anderson."

This case, like the preceding one, made an excellent recovery. The affected passage became perfectly free, every vestige of the

growth that could be seen being removed, and he went home in the middle of June.

In August, two months later, however, upon my request, his doctor examined him again. The boy was strong, heavier than ever in his life, felt perfectly well, and could breathe through his nose with the greatest freedom; but the examination proved that the growth was re-forming, and he was sent back at once to me for treatment.

I found the growth had already reached a large size, filling the upper and back part of the left nasal cavity, but not extending into the naso-pharynx. The attachment was to the vault and upper end of the posterior choana. It was richly supplied with blood and took a number of successive electro-cautery operations to remove it. These operations were continued for several weeks, as occasion demanded. I showed this patient and also Case 6 to the Academy of Medicine a month ago. There had been no operations on him for more than 2 months and there have been none since. The lad now feels quite well, and in order to have him under regular observation and operative treatment, with the hope of completely eradicating all tendency to the return of the disease, I secured a situation for him. He is one of the patients shown.

These seven cases were all private patients. They were all males, their ages being respectively eighteen, twenty, twenty, twenty-one, thirty-five, fifty and fifty-eight years.

In every case the disease was unilateral so far as the nose was concerned, but occupying the whole vault when involving the naso-pharynx. Two occurred on the right side, five on the left. Every case but one had been previously operated on before it was referred to me, and in every case the diagnosis was confirmed by microscopical examinations by skilled pathologists.

Three out of the seven have permanently recovered—that is, after intervals of fourteen, seven, and two and three-quarter years, there has been no return. The fourth died from toxemic poisoning. The fifth has had no return in seven months, the sixth no return in the last two months, the seventh no return in the last two months—that is, out of the first four cases, there was a recovery of 75 per cent. and a death-rate of 25 per cent.

We may consider the last three too soon to be reported positively upon as cures.

I present this paper as a report upon research work, not in pathology, but in operative treatment, in one of the most dangerous, most repulsive, and most baffling of diseases that a human being can be afflicted with; and in doing so I want to draw your attention to the fact that among the names of the scientific men that I have mentioned whose text-books are in our hands, those that speak most hopefully with regard to the treatment of this disease are the ones who advocate, above all other methods, the use of the electro-cautery knife or snare. But they speak on general principles, giving few, if any, records of cases.

While this fact is an encouraging note, I can claim without danger of contradiction that I am the first to evolve a systematic method of treatment, carrying it out through a long series of cases and a long series of years, with a uniformly successful result.

My own experience has emphasized the following points, some of which I have never seen mentioned.

(1) In sarcoma of the nose the usual site of origin is in the soft tissues and not in the bony framework which supports them.

(2) That the origin is in the form of a pedicle, which rapidly becomes sessile.

(3) That as the sarcomatous mass enlarges and presses upon the surrounding mucosa, abrasions take place, which are quickly transformed into adhesions; and these adhesions in time will become almost co-extensive with the disease itself.

(4) That these adhesions never attain the vitality and virile power possessed by the pedicle. Hence, when once thoroughly destroyed recurrence does not take place upon the site of the adhesion.

(5) Recrudescence, however, frequently does occur in the region of the pedicle; and in view of this contingency this region should be kept under regular observation and control.

(6) When the nasal passage is filled with the sarcomatous growth any attempt to discover the site of adhesions will at once produce hemorrhage. Hence, intra-nasal removal by the knife should not be attempted; but as gradual and systematic dis-

section out by the cautery knife, except in extreme cases, is always available, it should not only be encouraged but should be insisted upon.

In closing, it may be as well to note that extensive granulation-tissue as well as tertiary syphilis may either of them be mistaken for sarcoma. But the answer in the cases I have reported would be: First, that the growths were larger and harder than those produced by granulation; and secondly, that they were removed and the patients cured by operative measures only, without resorting to specific treatment—something which it is impossible to accomplish in tertiary syphilis by surgery alone. Hence both these conditions may be ruled out of the question.

DISCUSSION.

Dr. WISHART.—The opening of the discussion upon such a remarkable series of cases as those just presented by Dr. Price-Brown is a somewhat difficult task, for while every praise must be given to Dr. Brown for what is really a unique record in nasal sarcoma, it still must be confessed that rhinologists are not at all agreed either as to the diagnosis or the prognosis.

Dr. Price-Brown has quoted rather largely from American authors but he might have mentioned also such British authors as McBride, Lack, and Tilley, who are quite as decided in their conclusions that "no treatment other than surgical holds out any hope of success" in sarcoma of the nose. Voltolini it is true refers to electrolysis, but its curative effects are spoken of as "nil."

Cases of nasal sarcoma are by no means rare. In 1902, Gibb, of Philadelphia, published a synopsis of 111 cases culled from the literature. Most cases end fatally, and the demand for curative treatment is urgent, but even in the face of these cases of Dr. Price-Brown, stretching over a period of 15 years without a death, I am unaware that any rhinologist has seriously adopted the procedure which he advocates.

The question is one of diagnosis. The differentiation between a round celled sarcoma, and a syphiloma is exceedingly difficult as Professor Anderson will tell you, and it is also a fact that different portions of the same growth may present wholly different appearances. In the article by Gibb above mentioned

it is affirmed that "unfortunately, the microscope is not infallible Cases have occurred in which the microscopical diagnosis has been that of malignancy, when the subsequent course of the disease has proven this to be fallacious." Knight also remarks that "implicit faith in the microscope as a guide in diagnosis is not advisable, at least when applied to sarcoma."

It would appear that the very success obtained would according to these views disprove the correctness of the diagnosis. It must again be noted that in many of the cases sufficient time has not elapsed to establish cure.

Sarcoma of the nose is exceedingly erratic in its behavior. as is well demonstrated by a case published by Dr. Levy, of Denver, in 1906. The patient, a woman aged 73, mother to a physician, presented a tumor filling one nasal cavity, a section of which under the microscope was pronounced round celled sarcoma. The case was considered inoperable, Iodide of Potash. administered for two months without result, and then Coley's fluid tried with a like result. The patient begging for some air, sufficient of the growth to give a fair passage was removed with the snare, and the cautery applied to the base. Four months later the growth had again become the size of an almond. which was again removed, and declared pathologically to be identical with the first specimen. Metastatic growths also developed on both legs. The nasal growth immediately reformed on a larger scale, the nose swelled and the patient was sent home to die. One year later, no further treatment being applied, the nose was found to be quite clear, the scar of the cautery was plainly seen as a furrow, the breathing was good. and all the metastatic growths but two had disappeared. The original specimens were sent to Dr. Welsh, of Baltimore, who declared them to be unmistakably sarcoma. Three years from the first examination, the patient died from exhaustion, due to the rapid recurrence of the tumors in the legs, but the nose remained free to the end.

Dr. Price-Brown's cases are further peculiar in the growth being confined to the nasal cavities proper, whereas many of those reported by others involved the ethmoidal regions, and the antrum.

Dr. Price-Brown is to be congratulated upon the comfort

his treatment has afforded to his patients, even if the rhinologists have not yet seen their way to the belief that he has discovered a "specific" for nasal sarcoma, and we would urge the necessity for repeated microscopical examinations by acknowledged pathological authorities, and also for the prior exclusion of syphilis by appropriate treatment.

Dr. H. B. Anderson congratulated Dr. Price-Brown on the very interesting series of cases he had presented and the remarkably successful results he had obtained. These results, obtained in a condition ordinarily regarded as so hopeless, were worthy of the most careful consideration by the medical profession. The discussion naturally turned on the accuracy of the diagnosis of sarcoma. He quite agreed with Dr. Wishart as to the difficulty of drawing certain conclusions from microscopic examination alone. At times even the most expert pathologist might be in doubt or error, basing his opinion solely on the histological characteristics presented. In every doubtful case, the clinical features of the case should be considered in connection with the microscopic examination. Clinicians were too ready to accept as final the laboratory report. What impressed him most with the series of cases presented by Dr. Price-Brown, especially the first one, was the fact that the clinical course and microscopic findings were completely in accord.

The growth itself was large and involved the tissues widely. it presented the gross appearances of sarcoma, it had recurred after previous removal by operation and presented the microscopic characters of a sarcoma. He cited cases of tumors pronounced by the most expert pathologists as sarcomatous, which had subsequently disappeared, and referred to a remarkable case coming under his own observation. The case cited by Dr. Wishart, of the sarcomatous tumor of the nose which had completely disappeared and the subsequent development of a metastasis in the leg, to his mind rather strengthened Dr. Price-Brown's position as indicating the possibility of local disappearance. Referring to the case which he had himself examined for Dr. Price-Brown, he stated that he had come to the conclusion that the condition was sarcomatous after a careful examination and with due regard to the difficulties presented by tissues of this sort. Of the more recent cases presented in Dr. Price-

Brown's series, sufficient time had not elapsed to warrant conclusions as to the ultimate results. Under any circumstances one could hardly hope that in cases of sarcoma of the nasopharynx in general that such uniformly successful results could be obtained as those reported. But if the treatment advocated by Dr. Price-Brown was successful in eradicating even an increased percentage of such growths, it was a great step in advance, and he was to be congratulated on his achievement.

Doctor Primrose congratulated Doctor Price-Brown on the results he had obtained in the treatment of the cases he had described.

The question had been raised as to the nature of the tumors removed and the difficulty which often arises in recognizing true sarcomatous new growth. One can recall instances of tumors which presented the clinical appearances of sarcomatous development, and on removal of a portion of such a growth for microscopic examination, the pathologists have considered its nature that of a sarcoma, and yet subsequently one has been surprised to learn of its disappearance without operative interference. These instances are rare, but they have occurred in the past; with improved technique and a wider knowledge of the life history of these growths, both from the clinical and pathological standpoint, the possibility of error is less than formerly.

At the present time there is a great deal of interest taken in the study of the spontaneous disappearance of malignant growths. Even in cases of chorion epithelioma, than which no more malignant tumor appears, spontaneous disappearance has been recorded several times. It has been hoped that by studying the conditions under which spontaneous disappearance of malignant growths take place some clue might be obtained to some more efficient method of treating such cases. In the cases which Dr. Price-Brown has described, Dr. Primrose would like to ask if there is any possible advantage claimed by Dr. Brown in the use of the electro-cautery which might result favorably in the prevention of the recurrence of these growths; how was it that Dr. Brown, by the use of his method, should obtain such good results when other surgeons have failed who had carried out what were apparently equally radical methods of dealing with sarcomatous growth?

Whatever the explanation may be as to the nature of the growth, or the special method of removal, Dr. Brown is certainly to be congratulated on what we must concede to be brilliant results.

Dr. John Hunter—Dr. Price-Brown has written a new chapter in the treatment of sarcoma. His method is thoroughly radical without the destruction, or removal, of normal tissues.

It is a subject for congratulation, that a Canadian, and a member of the staff of the Western Hospital, has originated and carried out successfully a method of removal of sarcoma of the nose from a series of patients who, from all clinical and microscopical evidence, were doomed. This new method of treating sarcoma seems to be not only scientific, but thoroughly rational. notwithstanding the gloomy pessimism permeating the quotations made from the literature on this subject. The future will doubtless prove that whenever this method is resolutely followed the prognosis, in cases of sarcoma within the nares, will be equally as favorable as when this disease is found in any other part of the body, where a radical operation can be performed successfully.

Dr. W. J. Wilson said he was very much interested in Dr. Price-Brown's cases, especially as he had seen the one of seven years' standing at the beginning of his treatment. The case at that time looked hopeless.

The case where the antrum had been diseased and where death resulted from sepsis was also of interest, as for many years previous he had been Dr. Wilson's patient, as also was his father, who, at death, showed on post mortem a cancer of the stomach, which had given no symptoms and had not been diagnosed. The argument put forth by Dr. Wishart that cases may occasionally recover spontaneously, and that the pathologists may have been mistaken in their diagnosis, would hardly hold for such a list as Dr. Price-Brown presents. That argument would make it appear that where the patient died the pathologist was right, but where he recovered it must have been either syphilis or tuberculosis.

Dr. Price-Brown's reply. Mr. Dean, ladies and gentlemen. While I thank you for your cordial attention and for examination and discussion of the cases presented, I desire particularly

to thank the University men for taking such an active part in the consideration of my paper, and for their approval of the results shown, no matter how much they may question the correctness of diagnosis.

After quoting English authors, Dr. Wishart, in expressing their views, says: "It would appear that the very success obtained, according to these views, disproves the correctness of diagnosis."

My answer is that case 1 was first seen by the leading laryngologist of Hamilton. It was diagnosed by him clinically and pathologically as sarcoma. After consultation with other surgeons it was decided that the only hope of recovery would be by radical operation. This was declined. The youth was then taken to a Boston hospital, and part of the growth taken away intranasally, followed by a rapid recurrence. He then came under my care. For the third time microscopical examination pronounced the disease to be sarcoma. The growth filled the right nostril and naso-pharynx, and the hemorrhages from it were exceedingly severe. In this case there has been no return in fourteen years.

Case 3, eight years ago, was placed in Dr. Wishart's hands for treatment. Microscopically and clinically he pronounced the disease to be sarcoma. Radical operation was arranged to be done at the General Hospital. This was declined. Later on he was referred to me. Microscopical examination of a section I removed confirmed the diagnosis. The history of this case already reported states that the last operation was two and three-quarter years ago. There is no return. Surely Dr. Wishart cannot doubt the correctness of diagnosis in either of these cases.

Case 2 was a working man aged 50, father of a large, healthy family. There could be no suspicion of syphilis in his case. He had no specific treatment. No return after seven years.

These facts should dispose of the first three cases.

In reply to the remark that my paper confines itself to nasal cases, my answer is that it accords implicitly with its title. I neither profess nor believe that antral sarcoma can be cured by electro-cautery operations, as in these cases there is always extensive bone involvement. Still, the fact that fimbriated ex-

tremities of sarcomatous tissue may extend into the maxillary antrum or sphenoid sinus, so long as they have no attachment within the cavities, does not affect the possibilities of removal by electro-cautery methods. In case 3, the anterior wall of the sphenoid sinus was absorbed and sarcomatous fimbriæ partly filled the cavity. In case 6 a similar condition existed in reference to the right maxillary antrum.

I fully approve of Knight's opinion, as quoted by Dr. Wishart, that: "Implicit faith in the microscope as a guide to diagnosis is not advisable." But when the microscopic findings fully endorse the clinical history, I agree with the majority of specialists in approval of the diagnosis. In reference to the three most recent cases, I agree with Dr. Anderson in the belief that sufficient time has not elapsed to warrant a positively favorable prognosis. But when we consider that in one of these there has been no return since the operative treatment was finished seven months ago, and that the man feels perfectly well to-day, the outlook is a hopeful one.

In reference to the other two, Nos. 6 and 7, although over two months has elapsed since either of them were operated on, no recurrence has taken place. Yet regrowth may occur at any time, and each patient will need assiduous watching for months to come—possibly, as in the case of No. 3, even for years, until final eradication has been accomplished. One remarkable thing about all cases of nasal sarcoma is, judging purely by my own personal experience, that these patients are not only willing, but anxious, to have the operation repeated as frequently, and for as long a period, as the operator deems necessary.

In answer to Dr. Anderson's remark that: "Under any circumstances one could hardly hope that in cases of sarcoma in the naso-pharynx such uniformly successful results as those reported could be obtained." I may say that in each of cases 1 and 3, the origin of the sarcoma was in the naso-pharynx. Both cases cured. In cases 6 and 7 the origin was also in the naso-pharynx. Both cured for the present but under observation.

Dr. Primrose's remarks upon the spontaneous disappearance of malignant growths I highly appreciate. It seems to me that this accords with the method of destruction that I advocate.

the operations being confined almost entirely to the removal of the new growth.

In answer to Dr. Primrose's question as to a possible advantage which removal by electro-cautery may have in preventing recurrence of the sarcoma, I may say that I am very glad that the question has been asked. It opens up a new field of enquiry, and I believe the answer awaits us. Sarcoma of the nose is an intensely hemorrhagic disease. The blood vessels and blood spaces contained therein possess no contractile power. Hence, when cut by knife or cautery they bleed profusely at once. The heat of the electric knife, however, coagulates the fibrin in the external adjacent tissues, and stops the bleeding, putting an end to both exosmose and endosmose, so that while checking the flow of blood, it also checks the absorption of cell life, and is a strong barrier against the local extension of the disease. You ask what proof have I to corroborate such a statement? Simply this, that, notwithstanding the intensely hemorrhagic nature of the nasal sarcoma, yet I never, after an electro-cautery operation, leave a tampon in the nose to prevent hemorrhage, no matter whether I operate ten times or twenty times or fifty times in the one nasal cavity. The patients whom you have seen to-day will all tell you the same story.

Of course, when operating you must always be guided by good judgment and personal experience, and never operate too much at one time. Also, while cauterizing, a sudden gush of blood may call for immediate packing with absorbent cotton at the site of the blood flow. But in a few seconds or minutes the flow ceases and the wool can at once be gently removed. And there will be no return of the bleeding. This process may be repeated as long as operations are required.

In closing, some of the speakers have fancied that I have mistaken tertiary syphilis or gumma for sarcoma. While doing so, they have not contradicted my statement that every experienced surgeon knows that you cannot cure a large, pronounced syphaloma by operation only, but must combine with it a course of specific treatment. Yet my cases have had no specific treatment. Not having any history of syphilis, they have been treated by operation only; and while the early ones are entirely cured, the more recent ones are at least temporarily well and seemingly free from the disease.

ARTIFICIAL LIGHT AND ITS EFFECTS UPON THE EYE*

BY JAMES M. MACCALLUM, M.D.
Associate Professor of Ophthalmology, University of Toronto.

So much work is done by artificial light, and so much complaint made of its injurious effect on the eyes, that it is well to consider the question of artificial lights and illumination. Experience teaches us that our eyes tire much more quickly in doing any given amount of work by artificial light than by daylight. Assuming the bodily conditions to be constant, this must be due to a difference either in the amount, or in the quality of the light, or to some faulty arrangement of the light. Light is not a physical quantity, but is the physiological effect exerted on the human eye by certain radiations. The physicist defines light as a form of energy. There are many forms of energy, as electric energy, heat energy, radiant energy, and all convertible into each other. Radiant energy is a vibratory motion of a hypothetical medium, the ether. Radiant energy can be derived from heat energy by raising a body to a high temperature. From the heated incandescent lamp filament, for example, the heat energy issues as radiations of different frequencies, *i.e.*, of different wave lengths. The waves of light are transverse, while those of sound are longitudinal.

We are all familiar with low and with high notes, and know that they are due to less or greater frequency of vibration of the sound waves. We easily appreciate the fact that there may be notes of such slowness of vibration, or of such frequency, that the human ear cannot perceive them. Just as the human ear perceives as sound only certain frequencies of sound wave, so also only certain frequencies of light waves are perceived as light by the eye. Frequencies, lower as well as higher, are invisible. The invisible rays of lower frequencies are called infra red or heat rays. The rays of higher frequency are known as ultra-violet, chemical or actinic rays. Of these three kinds of rays given off from every light source, only the visible rays and the invisible ultra-violet affect the eye and demand consideration.

*A paper read before the Ontario Medical Association, June, '09.

The eye is a physical organ not a mere camera. It has become habituated to, and adapted to, light coming obliquely from above, and resents strong illumination, natural or artificial, from any other direction. Bright sunlight, because of its reflection, as well as because of its intensity, is not desirable. But the general properties of sunlight must be sought in ordinary artificial illumination, namely steadiness, absence of pronounced color, downward oblique direction, wide and strong diffusion, freedom from sharp and black shadows.

The ideal light is the diffused light of a room with good window surface looking to the north. The direct sunlight being excluded, the candle power ranges from 5 or 6 near the window to a half candle or less in the darker parts. One never tries to make a room as bright as by daylight; one is content if the desk upon which he is working or the book which he is reading is sufficiently illuminated. The important thing is not the amount of visible rays coming from the source of light, but the amount of light which reaches the object seen; *not the light, but the illumination from the light.* The light as regards its candle power may be ample, but it may be so placed, or so arranged, as not to give sufficient illumination.

Of equal importance is the amount of light which reaches the eye from the illuminated object. This varies with the widening or contraction of the pupil. The eye automatically adjusts itself to the intensity of the light. If there is in the field of vision a source of high intrinsic brilliancy, the eye protects itself by contracting the pupil, and thus receives much less light. If the source of light is taken out of the field the pupil dilates, and more light is actually sent into the eye, although only the same amount strikes the illuminated object; that is to say, a *higher physiological efficiency is obtained. More light may reach the eye, even though much less reaches the illuminated object.* To put it in other words, the candle power may be lessened, and yet by proper management a larger amount of light is made to enter the eye.

The eye is evidently protecting itself not against light, but against the energy of radiation. The energy of radiation, however, is chiefly in the ultra-red end of the spectrum, so that it is the red and yellow rays chiefly which cause the pupil to contract.

The great drawback to all artificial lights is their excessive

brightness. *The immediate artificial source of light must not be* too bright in itself, if it is to diffuse sufficient light. If a brilliant light falls upon the retina, the visual purple is exhausted and there results an after image more or less persistent. The eye shifts itself about to get away from the brilliant light, and protects itself by contracting the pupil. *The pupil may be so contracted that the rest of the field may be dimmed so much as to interfere with proper vision,* quite aside from the fatigue caused by the bright light wandering over the retina as the eye is shifted. To protect the eye from the direct effect of the intense light either a shade is put over the light, to throw its rays downwards—or else a ground glass, which diffuses as well as modifies the intensity of the light.

The intrinsic brightness of the light is not of much importance optically but physiologically it is of the greatest significance. The injurious effects to the eye increase with the brightness of the naked light, and with the area of the source of light. "No matter what the area may be, the intrinsic brightness per square centimetre of that area cannot safely exceed .75 Hefner candle."

Only candles, flat kerosene, and flat gas burners fall within the limit of safety. The tubular central draft kerosene lamp, now so popular, acetylene, and all incandescent gas lamps should be inclosed in ground glass or matt globes. Incandescent electric lights are still brighter, and their brightness increases with their candle power. The most dazzling of all artificial lights, with the exception of the electric arc light, are the new metallic filament (Tungsten) lamps and the Nernst lamp.

The limit of intrinsic brightness of .75 Hefner candle per square centimetre of illuminating surface is exceeded by round kerosene burner 5 times, Auer incandescent gas light 8 times, Carbon filament 100 times, New Metallic filament 270 times, Nernst lamp 550 times, electric arc 4,000 times.

The striking thing here is the astonishing difference between the electric light and the ordinary flame illumination. The very great intrinsic brightness of the incandescent light is a menace to the eye. If these powerful lights used in offices and houses can be concealed and the light reflected from walls, ceilings, etc., that should be done. If this cannot be done, they should be inclosed in globes so as to appear as uniformly luminous surfaces. The

globes should be made of a kind of glass that absorbs the ultra-violet rays.

Brilliant light direct or reflected should be kept out of the eye, and upon the objects to be illuminated. The proper place for the illuminant is outside of the field of vision. If it cannot be put so, its intrinsic brilliance should be lessened by diffusion. This is the reason for indirect lighting. Even though a great amount of light is thrown on an object in a room, if the eye is fatigued by seeing the source of light, very little light will enter the eye.

In general terms the iris adjusts itself with reference to the brightest light it has to encounter, so that if there is in the field of vision a source of light of great intrinsic brilliancy, the working illumination may be highly unsatisfactory. This principle coupled with retinal fatigue explains how one is unable to see beyond a brilliant light, *e.g.,* the search light of an automobile. If when reading by artificial light correctly placed another bright source of light is placed so that its rays fall directly on the eye, the print at once seems to become dimmer.

It is often asked why moving pictures are so tiring to the eyes. It is not merely the movement. It is due to the flickering of the arc lamp on the alternating current. Even with fixed objects the flickering of the arc lamp is visible at 40 to 45 cycles. By moving a pencil or the finger quickly when strongly illuminated, these fluctuations are easily detected even at 60 cycles. It is not so well known that ordinary electric lamps on an alternating circuit distress the eye by flickering. A 16-c.p. lamp at 100 to 120 volts shows flickering at about 30 cycles per second; at 25 cycles the flickering is very annoying to the eyes; at 20 cycles it is most intolerable. If one looks directly at the light the filament is so dazzling that the fluctuations of the lamp are not noticed. A low frequency lamp may appear to be quite steady and yet distress the eye.

Seeing takes place by the recognition of differences in color and in intensity. Differences in intensity include shadows. Shadows are essential in seeing. We must have some shadows. If there are no shadows there is an appearance of flatness which distresses the eye accustomed to perceive form and position by shadow. If there are no shadows we depend on binocular vision to locate form and position, and we feel at once the strain.

When there are no shadows the illumination must be nearly equal from all directions. If the illumination be strong enough from any particular direction to be convenient for work requiring close attention of mind and eye then (if there are no shadows) equally strong light will enter the eye from directions altogether unwonted. This is objectionable, for the eye, as we all know, dislikes crosslights.

In some cases shadows are objectionable, *e.g.,* if the shadows are very dark, for then the eyes are tired by trying to see in the shadow. In other cases shadows are necessary for clear distinction. A room with white walls is not as agreeable as one with darker walls. There seems to be too much light. Yet there cannot be too much light, for there is not nearly as much light as there is in the daytime out of doors. There is too large a percentage of diffused light. The intensity of the diffused light is too great as compared with the directed light. The shadows are lost and the eye is tired.

Illumination is general or local (concentrated). We obtain our illumination, either by first, direct, or second, indirect lighting. The rays from the source of light pass directly to the illuminated object, or indirectly either by passing to a reflecting surface, thence to the object, or by passing through a refracting body to the object, as the frosted incandescent lamp globe, or the opal globe of the arc lamp.

Of course a good deal of light is wasted by reflection and refraction. Indirect lighting by reflection or refraction is done by a reflector, or a holophane, or frosted globe, or by reflecting the light from the ceilings and walls. White walls, of course, give the highest efficiency of reflected light.

In the school-room or concert hall general illumination is needed, for they demand a uniform fairly high intensity of light.

In the house the problem is to get sufficient directed light (from windows), and sufficiently low diffused lighting (reflected from the walls), to give the best vision. But at night, with the electric light, or the gas light, sending out light in all directions, the amount of diffused light is much greater than in the day time, and the directed light much less. This strong diffused light is not comfortable to the eye. For this reason the walls are shaded, so that a great lot of light (about 3-4) is absorbed. The

object should be to give sufficient directed lighting on the dining or reading table, and only so much diffused lighting as is compatible with the amount of direct used. The quality of the light must also vary according to the colors and shades used in the room.

On the desks of an office there is needed a moderate general illumination, and a far more intense local illumination, thus avoiding dense shadows and dark corners. A very intense general illumination would do in this case, but is not economical, and the glare is blinding.

The old rule for reading and writing is that the light should come obliquely over the left shoulder. By receiving the light from this direction direct light is kept out of the eyes. Any light regularly reflected is generally out of the way. The eye catches then only diffused light from the paper before it, and if the light comes from the left (for a righthanded person), the shadow of the hand and arm does not interfere with vision. If work, requiring both hands is being done. the best illumination is had by directing it downwards and slightly from the front, care being taken to avoid strong direct reflection into the eye.

Avoid glare direct or reflected, and get strong diffused light from the object illuminated.

What amount of illumination is needed?

For ordinary reading and writing an intensity of a candle foot is needed. With ordinary type set solid or with the smaller types (diamond), two candle feet is often needed. The quality of the ink and paper are, of course, important factors. Highly glazed paper is said to reflect 80 per cent. of the light. At 1-10 or 2-10 of a candle foot, reading is hard, and there is the tendency to bring the reading close, straining the accommodation.

This minimum of one candle foot should be doubled for really effective lighting. For much fine detail and work on colored materials not less than 5 candle feet should be provided. This also may be doubled for the finest mechanical work, such as engraving, watch repairing, and similar delicate operations. For such cases the more light the better, provided the source of light and direct undiffused reflections from it be kept out of the eyes.

Practically all methods of lighting are based upon incandescence. Incandescence means that the temperature of the

heated body is raised to such an extent that some of the radiations from it become visible as light. The higher the temperature the more radiations visible as light, and the more ultra-violet rays. The problem is to reach as high a temperature as possible. In the gas flame and the coal oil lamp this temperature—that of combustion—is rather limited. In the incandescent carbon filament lamp it is limited by self destruction of the incandescent body. The temperature of the gas flame may be increased by increasing the rapidity of combustion, hence the flat slit instead of the round flame, giving a larger surface to the flame. It has also been increased by using a gas of higher chemical energy, viz., acetylene. (The acetylene flame is white, ordinary gas is yellow).

By increasing the energy input (voltage), we increase the temperature of the carbon filament, but at the same time we more rapidly destroy it. Replacing the carbon filament by some more refractory material (osmium, tantalum, tungsten), permits of the temperature being raised still higher.

The oxides of the refractory earths, thorum, cerium, etc., used in the Auer (Welsbach) gas mantle give an abnormally large amount of visible rays, making them very efficient incandescent bodies.

Sunlight is practically not very rich in ultra-violet rays, as they are absorbed rapidly by our atmosphere, and at the same time a considerable portion of them is lost by multiple reflection before reaching our eyes.

Some of the ultra-violet rays of many artificial illuminants are absorbed by the glass globe surrounding the source of light. The glass of ordinary spectacles also absorbs some of them. Only the very short waves—shorter than 300 micro-millimetres are so absorbed; and these are the least dangerous, because they penetrate least into the human body. The most efficient, and therefore the most dangerous ultra-violet rays are those between 300 and 400 micro-millimetres in wave length. Ordinary lamp glass and spectacle glass do not absorb these rays at all.

Ordinary protective spectacles and eye-glasses allow these (blue) ultra-violet rays to enter the eye. Smoke gray spectacles reduce their intensity, but do not extinguish them entirely—but at the same time they diminish the total illumination.

The percentage of ultra-violet rays has increased greatly with the increased temperature and intensity of our artificial lights.

The ordinary arc lamp which is, from the intensity of its heat, the richest in ultra-violet rays, is not used for ordinary household or office illumination, so that it need not be considered. It is very problematical whether the other varieties of electric lights have sufficient heat to be worth considering as to their ultra-violet rays. It is with them chiefly a question of intrinsic brightness.

Patients with asthenopia often complain of the effect of gas light upon their eyes. Any room lit by gaslight should be well ventilated, for two gas burners to illuminate an ordinary room will throw off as much carbon as ten people.

Aside from its effect on the air, the average gas light is arranged to illuminate the ceiling rather than the room. Even when properly arranged the gas is very apt to flicker, either because of the varying pressure or from defect in the tip. This irritates the eye, because the constantly varying illumination demands a constantly varying pupil and accommodation. The ideal light is steady, does not flicker and does not give off too much heat. The asthenopic eye is intolerant of heat.

The students' or table gas lamp is easier on the eyes, probably merely because of being arranged both as to position and as to shade, so as to give better illumination than the ordinary gas light.

Time and again patients remark that they find the Auer light softer and less trying than the ordinary carbon filament electric lamp. It is easier on the eye because it does not exceed, to the same extent as the electric lamp, the standard of intrinsic brightness—.75 Hefner candle per square centimetre of illuminating surface. It has not so many ultra-violet rays, and to many eyes its bluish-white or greenish-white color is more pleasing than the yellow of the carbon filament lamp. Some eyes seem to react more to one color than to another.

The electric lamp has the great advantage over all others of not in any way affecting the air of the room, and of practically not heating the room, for we do not need to consider the electric arc lamp with its intense heat, and its disagreeable hissing sound, due to the heating and cooling of the air.

The ordinary carbon filament lamp is capable of only giving a certain candle power. It cannot be used on currents of very

high voltage (thus increasing its incandescence (like the arc lamp). The life of the carbon filament is very limited. Carbon can scarcely be melted, yet it volatilises very easily at a high heat. This volatilised carbon deposits itself on the glass globe, blackening the lamp and lessening its candle power. One starts off with 16 candle power, but very soon it is far from that, and one is having insufficient illumination. With this volatilisation the filament soon becomes thinner and breaks.

A great objection to the plain carbon filament lamp is that the filament is placed in such a way as to throw a band of light and then a shadow, another band and another shadow, so that as the eye passes over the page it passes from light to dark, light to dark and must accommodate itself to each. It really is the same thing as a flickering oil or gaslight.

To obviate this, and to protect from the excessive intensity of the filament the bulb is frosted. While this is done at the expense of diminished directed light, it, in the way already pointed out, practically results in increased illumination.

The advance made by the incandescent gas mantle has necessitated improvement in the carbon filament The electric light with tungsten filament will inevitably supersede the carbon. It gives, roughly, 50-c.p. for the same expenditure of electric energy as a carbon filament of 16-c.p. Its candle power does not vary to the same extent, its life is longer, its filaments are so arranged that the band of light from one fuses with that of another, so that there are no alternate bands of light and shadow. Its intrinsic brightness is much greater, and hence it needs still more to be frosted, so as to diffuse the light.

School Hygiene

The educational world moves on in the direction of the medical inspection of schools. The Commission of Education for the United States, the Hon. Elmer Ellsworth Brown has just issued Vol. I of his annual report for the year ended June 30, 1909 from the Government Printing Office at Washington. Education for Health is sympathetically treated in the Report and the Commission speaks first of all of the International Congress on Tuberculosis as a means of Education, then of the establishment of a Department of Preventive Medicine Hygiene in Harvard, so that men may be prepared to serve on Boards of Health, investigate epidemics, etc. During the year Medical Inspection of Schools has been provided for by enactment in Louisiana, Colorado, Indiana, Ohio and New Jersey, and travelling physicians have been appointed for the first time in the Alaska School Service, whose duty it is to treat the sick amongst the Eskimos and Indians and teach them how to live in a healthy way.

Open air schools for tuberculosis children have been established in Boston, Brooklin, Providence, New York, Pittsburg, Chicago, etc. The commission also mentions the work of Drs. Gulick and Ayres of the Russell Sage Foundation, on Medical Inspection of Schools and refers to the approach of the Third Congress of School Hygiene, in Paris, August 2-7, 1910.

The regulations for the St. Louis Medical School Inspectors, which are admirable, are given in full in another part of the report and finally the report of the British Royal Commission on the Feeble-Minded, is ably reviewed so far as it refers to children. The review concludes thus: "One conclusion stands out with marked distinction, namely the importance of such adjustments of the public provision for education as shall meet the capacities and conditions of defective children without detriment to the great mass of children who are of normal health and capacity."

ABSTRACT

Uniformity of Vital Statistics.—J. N. Hurty, Indianapolis (*Journal A. M. A.*, December 12), insists on the importance of correct vital statistics and their uniformity in the different States. This can be secured by following the principles laid down in the circulars issued by the Bureau of the Census, and more especially the one entitled "Legislative Requirements for Registration of Vital Statistics," which, he says, should be incorporated in all laws enacted for the purpose. The greatest difficulty experienced in Indiana in collecting accurate mortality statistics has been in the use of indefinite terms for the causes of death; the difficulty in securing reports of all deaths is not so great, as this can be enforced by law. The securing of records of births is obviously more difficult than the securing of death records, and in neither case can absolute accuracy be secured. Promptness in the report is extremely desirable, and Hurty thinks that the ten-day period allowed in the bill of the Committee on Vital Statistics should be changed to one day. The post-office address of the mother is also very desirable, as it is to her that it is usually necessary to appeal for the name of the child. For these and some other reasons, some additions have been made to the recommended blank form, by the Indiana State Board of Health. One of these was added for sanitary reasons only, viz., Were precautions taken against ophthalmia neonatorum, which he thinks is justifiable on a birth certificate, though it might be criticised from a purely statistical point of view. The form of letter sent to mothers asking for the name of the child is reproduced in full. Only occasionally does it fail to receive an answer, and it also presents the opportunity of sending, without an additional cost, a leaflet on the proper care of children. It is also found that in other ways it has the missionary effect intended.

The Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
43 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Consulting Surgeon, Toronto General Hospital, etc.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon Toronto General Hospital.

Orthopædic Surgery:
B. E. McKenzie, B.A., M.D, Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; A. R. Gordon, M.D., Toronto; Helen MacMurchy, M.D., Toronto.

Dermatology:
D. King Smith, M.B, Tor., Toronto.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendant, Gravenhurst Sanatorium, Ont., 722 Spadina Ave., Toronto.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto.

Bacteriology:
J. G. Fitzgerald, M. D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D, Mimico Insane Asylum; Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Physiology:
A. B. Eadie, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Trinity University, Pathologist Hospital for Sick Children, Toronto, Associate Demonstrator of Pathology, Toronto University; Surgeon Canadian Pacific R.R., Toronto; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

THE STATUTORY MEMBERSHIP OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO

UNDER the provisions of the Ontario Medical Act, Section 6 (1) provides that the Council shall be composed of the following persons:

"(*a*) One member to be chosen from each of the universities, colleges, and other bodies, hereinafter designated, to wit: The University of Toronto, the Queen's University and College of Kingston, the University of Victoria College, the University of Trinity College, the Royal College of Physicians and Surgeons, Kingston, the Toronto School of Medicine, Trinity Medical School, the Ottawa University, Regiopolis College, the Western University, and of every other university, college or body in the Province now by law authorized, or which may be hereafter authorized, to grant degrees in Medicine and Surgery, and which establishes and maintains, to the satisfaction of the College of Physicians and Surgeons of Ontario, a medical faculty in connection therewith.

(*b*) Five members to be duly elected by the licensed practitioners in Homœopathy, who have been registered under this Act, or under the provi-

sions in that behalf of any Acts mentioned in Section 3 of this Act.

(*c*) Seventeen members, to be elected in the manner hereinafter provided, from amongst and by the registered members of the profession, other than those mentioned in the preceding clauses of this Section.

(2) No teacher, professor or lecturer of any of the bodies in this Section mentioned shall hold a seat in the Council, except as a representative of the body to which he belongs."

At a regular meeting of the Ontario Medical Council, held December 9th, 1909, a report of the Legislative Committee was presented, which advised a change in the wording of Section 6 (1) (*a*) of the Ontario Medical Act, and showed that sub-section 2 of the same section was, and had been, violated. The committee reported that, in its opinion, the University of Toronto, Queen's University, Kingston, and the Western University, London, were the only educational institutions entitled to representation in the Council. At present there are eight collegiate representatives in that body, viz.: Dr. Britton, University of Toronto; Dr. Ryan, University of Queen's College; Dr. Moorehouse, Western University; Dr. Starr, University of Victoria College; Dr. A. J. Johnson, University of Trinity College; Hon. Dr. Sullivan, Royal College of Physicians and Surgeons; Dr. J. A. Temple, Trinity Medical College, and Sir James Grant, M.D., Ottawa University. In accordance with the wording of clause (*a*), Sec-

tion 6, of the Ontario Medical Act, the five last-mentioned gentlemen are still qualified to sit as members of the Council; in the opinion of the Legislative Committee, they should be legislated out of existence as members of the Ontario Medical Council. After this recommendation had been discussed in Council, it was referred back to the Legislative Committee for further consideration.

Of course, there is no reason why clerical accuracy should not characterize the wording of the Ontario Medical Act. Then, why was this clause not amended by the Legislature many years ago? Why perpetuate an absurdity, by continuing to grant representation in the Ontario Medical Council to Universities and Colleges, which do not, and will not, support a medical faculty? Should the University of Trinity College pull her neck out of the yoke and resuscitate her medical faculty, a place could be found her for one representative in the Ontario Medical Council. Now she has two there, although she has no medical faculty.

It may be that the seventeen territorial representatives in the Council think that eight collegiate representatives are too many. It may be, that even five collegiate representatives would be too many; but if the University of Toronto were allowed to have three representatives, the Queen's University and College of Kingston one representative, and the Western University of London one representative, the representation in the Council of all other colleges being abolished, the proportion between collegiate

and territorial representatives would seem fair enough, and the teaching bodies would still preserve a sufficient influence. With five homœopathic representatives, as at present, such a Council, twenty-seven in number, ought to be large enough to transact the business of the College of Physicians and Surgeons of Ontario.

The Legislative Committee also expressed the opinion that no teacher, professor or lecturer of any of the bodies mentioned in clause (*a*), Section 6, of the Ontario Medical Act, should hold a seat on the Council except as a representative of the body to which he belongs, thus quoting the exact words of sub-section (2), Section 6, of the Act. Now, Dr. F. N. G. Starr sits as a collegiate representative in the Council, representing the University of Victoria College. As a professor, lecturer or teacher of the University of Toronto, he is not qualified to represent in the Council any other university or college except the body to which he belongs, viz., the University of Toronto. The University of Toronto is by the Act entitled to one representative on the Council, and it already has one, Dr. Britton. Hence it follows that Dr. F. N. G. Starr, who is a lecturer in Toronto University, has no *locus standi* as a member of the Ontario Medical Council.

Another member in the same position as Dr. Starr is Dr. J. A. Temple, an emeritus professor of the University of Toronto, who also represents Trinity Medical College in the Council.

In reference to both these gentlemen, it will be

evident that, in our opinion, they are hard hit. They ought to choose between the Council and the University of Toronto, at least, until the action of the Legislature so amends the Ontario Medical Act, that they can be legally permitted to serve in both these bodies at the same time. J. J. C.

MEDICINAL TREATMENT OF SUBACUTE AND CHRONIC GOUT

As gouty subjects are more prone to suffer from the injurious effects of constipation, of even a slight degree, than are non-gouty individuals, purgatives should be combined with colchicum in the treatment of gout. From personal experience, we can recommend a pill made of half a grain of extract of colchicum, half a grain of podaphyllin, and two grains of extract of aloes, the dose to be repeated according to the requirements of the case. A milder remedy than colchicum is guaiacum resin, which may be given as an alterative to stimulate the metabolism of the liver, and relieve an engorged portal system. From five to ten grains of guaiacum should be given in cachets two or three times a day, according to its effect on the bowels, since guaiacum sometimes acts as a laxative. This method of giving powdered guaiacum in cachets is preferable to giving the tincture of guaiacum in a mixture, as in the latter form a nauseous medicine is produced and the precipitated resin tends to cling to the tongue and fauces of the patient. Free

diuresis should be produced by the drinking of sufficient quantities of pure water. The citrate of potassium or the bicarbonate of potassium may be also used with advantage as a diuretic to encourage the elimination of the toxic agents of gout. The potassium salt is converted into a carbonate in the kidneys, and serves to diminish the acidity of the urine, which is generally high in connection with the gouty paroxysm, while, at the same time, it increases the solvent power of the urine for the uric acid salts, and so assists in their elimination.

In cases of sluggish action of the liver, gastro-intestinal catarrh and torpor, gouty dyspepsia and other forms of irregular gout, in which there are no appreciable uratic deposits in the joints, the moderate use of mineral waters containing sodium salts is beneficial, owing to the action of these salts as hepatic and gastro-intestinal stimulants. As much cannot be said for lithia salts, which are very much used as remedies for gout. The principal objections to lithia are its toxicity and its depressing action on the heart. To offset these dangerous characteristics, it is used in such small doses, that any real therapeutic effect from it is open to serious doubt. The regular use of lithia as a curative for the gouty diathesis is not good practice.

In marked cases of the gouty diathesis, the joints, especially the joints of the hands and feet, become enlarged and tender owing to two causes: the deposition of sodium biurate in the cartilages and fibrous tissues of the affected joints, and a chronic inflam-

matory thickening of the fibrous tissues of these joints. For the reduction of this thickening, as well as for painful gout of the sole of the foot, and for gouty neuralgic affections, iodide of potassium may be administered internally in doses of ten grains three times a day, and this medication ought to be continued for a considerable time.

Plethora from high living and lack of exercise induces a rise of blood pressure, which, if long continued, causes an injurious strain on the arterial walls. Hence the necessity of a spare diet in gout, together with moderate exercise in the open air. The occasional use of the colchicum pill mentioned above, by eliminating toxins, will tend to prevent arterial disease and recurrence of gouty paroxysms. J. J. C.

WHY ARE NOT TORONTO SCHOOLS MEDICALLY INSPECTED?

THE subject is not a new one. It has been under discussion for several years, so why has not Toronto medical inspection in its numerous Public Schools, we may again pause and ask one another. Not because there is no real necessity for it, not for lack of interest on the part of the National Council of Women, for, for years past, the earnest President of one of their branches has besieged the powers that be, voicing their request for proper medical inspection of the school children. They have brought concise and unanswerable arguments to show that it

must be sooner or later, and if later, and an epidemic "breaks out" among the children, they will know upon whose shoulders the blame and penalty should fall.

The representative medical body of the profession in Toronto, The Academy of Medicine, adopted recently the following resolution:

Resolved, 1. That the Academy of Medicine hereby recommend that medical inspection of schools be carried out in Toronto as an integral part of our school work and of the public health service.

2. That steps should be taken at once, so that on the re-opening of our schools in September, 1909, a beginning might be made in at least a few schools, for example, Elizabeth Street, McCaul Street and Hamilton Street Schools, in the older and more central portions of the city, where the school population is large, and the foreign-born and recently-emigrated citizens are numerous, and where there is much room for improvement in the housing conditions.

3. That as a beginning, two School Medical Officers (to give their whole time to the work) should be appointed, to act under the direction of the Medical Health Officer of Toronto, and that as many School Nurses as may be found necessary should also be appointed.

4. That copies of this abstract and report be forwarded to the Hon. the Minister of Education, His Worship the Mayor of Toronto, the Medical Health Officer of Toronto, the Board of Education, and the

Local Board of Health, and that at the same time we would respectfully draw their attention to the fact that Toronto is woefully behind in this matter, and that its rapid growth, and its large foreign population call for immediate action, so that a state of things unworthy of a metropolitan city like Toronto may no longer be permitted or perpetuated.

Again, upon being asked their views on the subject at issue, the candidates for aldermanic and other New Year honors express themselves before election as simply gushing to see every little school-child medically examined. We sincerely hope that such inspiration will not drop to zero—" when the man is made a hero." So far all things seem ready, only two obstacles perhaps in the way, one the expense, the other the Board of Education itself; surely the expense, if properly apportioned, cannot be enormous, especially when the Board are willing to smilingly use well on to half a million of the people's money to build a new Technical School. It seems almost to be a part of the qualification for office in America to be experts at " straining at gnats and swallowing camels."

On the other hand, the Board of Education may say that the Medical Health Officer is expected to inspect the schools. He has done the best he could, in having given the teachers lectures on Hygiene, etc., but good as far as it goes, it is not all that is necessary to maintain a clean Bill of Health. Teachers could not possibly be expected to obtain medical knowledge enough to diagnose disease by

listening to a few such lectures, when physicians (in the making) spend five years trying to fit themselves to even meekly offer an opinion. Again, teachers are not necessarily all believers in disease, perchance some are Christian Scientists. Our capable M. H. O. is not of that belief, and he carries around with him something, light though it may be, in the form of matter which he terms his body, in which his mind is stored, and as it takes time to " oscillate " this complete outfit from school to school, do his best; and he does, he cannot medically inspect the numerous schools of this city except by " absent " treatment.

All we need add is an R. S. V. P. to the Board of Education, for, " Seigneurs, the house is yours."

W. A. Y.

SPECIAL MEETING OF THE ONTARIO MEDICAL COUNCIL

On December 7th a special meeting of the Council began which lasted until noon of the 10th, and surely it was an epoch-making meeting. One of the most important subjects that came up for discussion was the proposed amendments to the Roddick Bill, and these, with a number of suggestions that it is thought will tend to make the Bill more workable, passed the Council, and the Legislative Committee of the Council has been instructed to secure legislation enabling the Province of Ontario to participate in the advantage of the Canada Medical Act, otherwise known as the Roddick Bill. The Enabling Clause

will be based on a similar clause of the Medical Act of the Province of Alberta.

The Council had some unpleasant duties to perform, viz., the striking of the names of two members of the profession from the Register, and while the obligation was an exceedingly unpleasant one, the Council did not shrink from what appeared to be its full duty. There is a move on foot, too, to have the Medical Act altered so that the process of investigation will be more speedy, and in the event of a conviction before the criminal courts a registered member may be struck off on proof of such conviction only.

At the request of the Thunder Bay Medical Association, the Council will also seek legislation for the addition of a further territorial representative for the Port Arthur, Fort William and Rainy River district. This will, of course, to some extent, disturb the balance that has been more or less maintained between the appointed and the elected members.

There was also a determined effort made in the Council to dispense with the services of the representatives of certain colleges, and while we fully agree that there should be some alteration in the college representation, still we think the proper course to adopt would be to approach the Legislature and have the Medical Act amended.

During the last morning of the meeting, Doctor J. M. MacCallum made an inquiry regarding the question of expenses connected with the examiners, as he had discovered several apparent discrepancies,

more particularly with reference to mileage. For instance, where two examiners came from the same town, one of them seemed to travel nearly twice as far as the other, and it was felt that there should be some better method of checking over such expenditures than at present exists. We should think this was a matter for the auditor, and now that the members of the Council, have awakened to a sense of their responsibility, we would humbly suggest that some of the officials of the Council—and the auditor in particular—would awaken to the responsibility that rests upon him in checking over accounts. Whether rightly or wrongly, we take no little credit to ourselves for having assisted in the awakening.

W. A. Y.

FURTHER ACCESSIONS TO OUR STAFF

It affords us great pleasure to announce the names of three medical men of high attainments in the world of medical science who have united with the staff of collaborators of The Canadian Journal of Medicine and Surgery:

Dr. Llewelys F. Barker, Professor of Medicine in Johns Hopkins University, the worthy successor of Professor William Osler, and also a son of whom Canada is justly proud;

Dr. J. G. Fitzgerald, Demonstrator of Pathology, University of Toronto; and

Dr. Harry B. Anderson, of St. Michael's Hospital, Toronto.

W. A. Y.

A SUFFRAGIST ENTERTAINED BY THE WOMAN'S MEDICAL ALUMNI

THE Woman's Medical Alumni gave a luncheon and reception recently in honor of that brainy woman and suffragist who recently visited Toronto (from England), Mrs. Snowdon.

It speaks strongly for the cause of womanhood suffrage that in the realm of medical science man has welcomed woman as a confrere in the profession, and no one has ever yet heard the idea mooted to give her a *limited* license to practice. It's a shame not to give a woman anything she asks worthily and nicely for. For one universal reason, just to see the exquisite smile and the flutter of angel wings. It is enough to make a mere man say things that sound like Tom Hood—about bits of "Heaven upon this earth below."

W. A. Y.

Editorial Notes

The Rockefeller Hookworm Commission—

A commission to carry on a campaign of education for the eradication of hookworm disease has been recently established by John D. Rockefeller, president of the Standard Oil Company, of the United States. A prominent member of this commission will be Dr. Stiles, chief of the Division of Medical Zoology in the Hygienic Laboratory at Washington. Last month we alluded in an editorial note to the scientific performances of Dr. Stiles, Dr. Smith, of Atlanta, and Dr. Looss, relative to hook-worm disease, so that further mention of that aspect of the question need not be made. Dr. Stiles has also shown the advisability of adopting certain practical methods, which would tend to rid the Southern States of this widely diffused disease. He recommends provisions for the enlightenment of the poorer classes of the people as to the ways in which this disease may be acquired, the inculcation of health maxims, and instructions, which, if carried into effect, would protect them from its invasion, together with information as to the employment of suitable remedies for the cure of the disease.

The diagnosis of a disease of pandemic proportions having been made it remained to obtain an agency potent enough to secure its eradication. The Public Health Service of the United States has neither the legal authority nor the necessary funds to carry into effect the programme designed by Dr. Stiles. Mr. Rockefeller proved himself to be the Atlas of the occasion, by establishing a commission to deal with the hookworm disease and providing adequate funds to support the commission.

His achievement, which is unique in the history of medicine.

will find its fulfilment in the rescue of millions of people in the Southern States from hookworm disease and its sequels, thereby restoring them to wage-earning usefulness and raising the standard of health and wealth in that portion of the United States. Besides, the well equipped Rockefeller commission will be placed in a position to do excellent work for medical science and may, incidentally, help to rob socialism of a weapon, by showing that gold that buys health can never be ill spent.

The Migration of Consumptives to the Southwestern States Should be Discouraged—

In a report published, November, 1909, by the United States National Association for the study and prevention of tuberculosis, it is stated that 7,180 persons hopelessly diseased with tuberculosis annually go to die in the States of California, Arizona, New Mexico, Texas and Colorado, most of them by order of their physicians. Half of these cases are so far advanced in this disease that cure cannot be hoped for in any climate or under any circumstances. Besides, at least 60 per cent. of them are so poor that they have not sufficient means to provide for the proper necessaries of life, which means that 4,315 consumptives are either starved to death or forced to accept charitable relief every year. Attempts are therefore being made in Southern California and in Texas to exclude indigent consumptives or to send them back to the Eastern States. A good many consumptives, how many we cannot say, go from Canada to the Southwestern States. Now, consumption when diagnosed at an early stage can be arrested in Canada, and consumptives, rich and poor, should be encouraged by physicians to devote themselves to the hygienic treatment of their disease at home, before it is too late. To further this project, the erection and maintenance of consumptive hospitals in cities, towns and counties ought to be encouraged by medical societies. Looked at from an economic standpoint, it is quite clear that the conservation of

the financial resources of Canadian consumptives, particularly the poorer ones, would be more effectively secured if these patients were treated in Canadian hospitals. The money spent by them in travelling to and from the United States, with the doleful certainty that in many cases the expenditure of money will be in vain, and the fact that the percentage of curable cases of consumption is about the same in both countries, should induce physicians and philanthropists to agitate for the establishment of hospitals for consumptives in Canada, instead of encouraging the migration of these patients to the United States.

Ontario Clinic for Nervous and Mental Diseases—

In a communication signed by Dr. C. K. Clarke, Medical Superintendent of the Toronto Hospital for Insane and Dr. Ernest Jones, of the medical staff of the same hospital, we are informed that the Ontario Asylum Service has opened an out-patient department under the title of the Ontario Clinic for Nervous and Mental Diseases. Thanks to the Toronto General Hospital, the patients will be seen on Wednesday and Saturday mornings at nine o'clock in the building on Chestnut Street, occupied by the Gynecological Service of the Hospital. The aim of the undertaking is to supply advice and help to the patients, in the application of various psycho-therapeutic measures of treatment. Besides early cases of the psychoses, such as dementia præcox, manic depressive insanity, etc., cases of such mental maladies as obsessions, *folie de scrupule, folie de doute,* hysteria, phobias and anxiety neuroses will also be accepted. No cases of organic disease of the nervous system will be treated.

Canadian Cream—

Bulletin No. 189, (Cream) issued by the Laboratory of the Inland Revenue Department, Ottawa, gives the results of the analysis of 65 samples of cream purchased by the inspectors of the department in 13 out of 15 inspectoral districts of Canada.

This is the first time that a systematic inspection of cream has been made under the Adulteration Act. The work reported shows that the Canadian public is offered and accepts as cream an article varying in butter fat from about 42 to 11.10 per cent. The highest specimen registering 42.66 per cent. butter fat was sold in the District of Quebec, P.Q., the one registering 11.10 per cent. butter fat was sold in London, Ont., the next poorest sample, viz., 11.42 per cent. butter fat was sold here in Toronto.

The chief analyst recommends that the following definition of cream be made legal in Canada.

(1) Cream is that portion of milk, rich in milk fat, which rises to the surface of milk on standing or is separated from it by centrifugal force, is fresh and clean and contains not less than eighteen per cent. (18) of milk fat.

(2) When guaranteed to contain a higher percentage of milk fat than eighteen (18) per cent., it must conform to such guarantee.

(3) Cream must be entirely free from gelatine, sucrate of lime, gums or other substances, added with a view to give density, consistency or apparent thickness to the article.

(4) Cream must contain no preservatives of any kind; nor any coloring matter, other than is natural to milk.

(5) Evaporated cream, clotted cream, condensed cream, or any other preparation purporting to be a cream (except ice-cream) must conform to the definition of cream, as given above and must contain at least twenty-five per cent. of milk fat.

The report closes with the statement that a number of cream thickeners are on the market. Gelatine is a constituent of most of them; but calcium sucrate, gum tragacanth and other substances are often present. The chief analyst states that, in the next collection of cream made for analytical purposes in Canada, a systematic examination will be made for cream thickeners.

There is no legal standard for cream in Canada. The

standard mentioned by the chief analyst, is rather low. If, however, a standard for butter fat in cream is to be fixed by the Canadian Parliament, it would be well to place the standard so low that any honest specimen of cream could reach or exceed it.

The Cost of Milk Production—

In Toronto, to-day, "certified" milk sells for 15 cents a quart "uncertified" milk at the rate of 23 pints of milk for a dollar. In New York "certified" milk sells for 20 cents a quart, "uncertified" milk for nine cents a quart. In Canada and in the United States more elaborate care, more expensive work in dairies increase the cost of milk-production and raise the price of milk to the consumer.

Anything therefore, which serves to lessen the cost of milk-production, while at the same time improving the quality of milk, is of interest to the physician, the dairyman and the consumer.

At the Guelph Fair, Mr. H. H. Dean, professor of dairy husbandry, O.A.C., lectured December 8, 1909 to an audience of farmers on the subject of lessening the cost of milk production. He advised his hearers to pay attention to the health of the cows and to care for them diligently. Feeding must be watched carefully. Many farmers feed their cattle turnips in winter, he said, which accounted for the "turnipy" butter. He advised feeding sugar beets or Ferry's Leviathan Yellow Mangels. Stables should have lots of fresh air. Drinking water should be cool and fresh and in his judgment a cow relished water more when she got it outside. A cow should also be given exercise and should be taken out of the stable every fine day.

In answer to questions Prof. Dean said special cases needed hot or warm water, but as a general rule the cow preferred cold water. Experiments had proved that it was just as good to water a cow once or feed her twice a day, as to have water in

front of her all the time and feed her four or five times a day. He thought the best way to feed cows was to give them what they liked and could readily change into milk. By feeding cows meal or other food, the milk would not be made any richer. Mangels have no adverse influence on the flavor of milk. Some people judge the flavor of milk by its color, which was a common mistake. He strongly emphasized the need of great cleanliness.

Given a good type of dairy cattle, there does not seem to be anything in Prof. Dean's recommendations calling for that increase in the cost of milk production, of which one hears so much nowadays. J. J. C.

Correspondence

Editor cannot hold himself responsible for any views expressed in this Department.

Midland, Ont., Dec. 10th, 1909.

To the Managing Editor Canadian Journal of Medicine and Surgery.

Dear Sir,—Like probably many other practitioners in the Province, I read the Annual Announcement to try and glean some idea of what is going on in the Ontario Medical Council. One is naturally interested in what becomes of the money held, or supposed to be held, in trust by the Council for the members of the profession, as well as in the legislation that is being made for us year by year. It is rather a difficult matter to see where we are at in the maze of discussion and controversy, but sometimes one will find some little unsuspicious-appearing remark, one almost smothered in a verbose mass of contradiction that makes one "take notice." Referring to pages 321 and 322 of the Announcement of 1909, Dr. Temple, in the Annual Report of the Finance Committee, says, "$10,255 of the capital has been spent. No doubt some of this amount has been invested in property, but on referring to the Treasurer's statement at the back of the same Announcement I find that while the balance in the bank on June 30, 1908, was $48,359.31, at the end of the year the balance has shrunk to $44,745.17, a decrease of $3,614.14 in cash balance. During the year the total receipts were $27,756.77, which, added to the amount taken from the capital balance, makes a total expense for the year, as Dr. Temple puts it, in round numbers of $31,365 (page 325).

This is a large sum of money and without any details of expenditure it may be difficult to imagine where the money is going. Let us try and find, if possible, some reason for this expenditure, and perhaps the reiterated warning as to the necessity for economy might make us suspicious that there is considerable waste somewhere. Dr. Johnson, on page 330, speaks of the capital or balance in banks as an "inducement to spend."

On pages 337-338, Dr. Moorhouse says, "Expenses have been running up very high and rather lavishly," and also on page 347 he speaks of the expenses of committees. On page 321 we have a reference to a special committee's expenses of $45. This is surely a very small matter, unless it is that perhaps it may show the way the money is going.

On page 322 we are told, "That there were certain committees had a meeting during the time of the Session, and were paid $15 for that meeting beside the general allowance."

To return again to the Treasurer's Report—special committees seem to get away with large sums! Examiners' fees loom up very large also!

Now, Dr. Editor, perhaps you or some of your friends may be able to tell me why travelling expenses are put at 5c. per mile (both ways), when any railroad will sell return tickets for 5c. per mile (one way). Can you tell me, for instance, whether the Examiners attending oral examinations at Kingston, Toronto, and London, are paid mileage from the starting point to Kingston, back to the starting point, then to Toronto, back to starting point, then to London and back to the starting point, or are they paid mileage from the starting point to Kingston, to Toronto, to London, and finally to the starting point? Take some one place and figure what a difference that would make.

Some of these matters might be cleared up to the $2 contributor if we had a detailed financial statement.

The territorial representative who lives at the Sault belongs to two committees, Education and Discipline, and these two committees are apparently the most expensive we have to support. It is a long way to Sault Ste. Marie, and 5c. per mile and $15.00 per diem allowance must come high. It certainly would seem too bad to deprive Dr. Gibson of his right to sit on Committees because of expense, but if any other member of the Council was capable of taking his place surely a saving could be made. "Dr." Editor, could you give us the detailed expenditures of these two Committees?

What I would suggest to the members of the Ontario Council —perhaps I am presumptuous, but here it is—Let us have an altered Announcement in 1910; cut out the members' remarks; give us only the resolutions, with mover's and seconder's names,

and yeas and nays; and add a detailed statement of every expenditure; go to the Ontario Legislature and get a Medical Act that you can interpret, and one that will confer power to act, and save us legal expenses of $746.00, as was incurred last year, (largely in advising the members of the Council whether they could or could not act under the present Medical Act.)

We want economy, but if we cannot have it let us at least have a "run for our money," give us the details.

SIMCOE PRACTITIONER.

Society Proceedings

THE ACADEMY OF MEDICINE

The third slated meeting of the Academy of Medicine was held in the Biological Building of the University of Toronto, on Tuesday, December 7th. President Alex. McPhedran occupied the chair, and Dr. H. J. Hamilton, as of yore, was general secretary. The guest of the evening was Dr. Maurice H. Richardson, Professor of Surgery at Harvard University, who delivered one of the finest addresses that the Academy has so far been privileged to listen to. Professor Richardson's subject was, "The Borderland of Medicine and Surgery," and we hope to publish the lecture *in extenso* for our readers in the February issue. The address was listened to by a large audience with great interest. The Academy is indeed honored by the visit to our city of such men as Professor Richardson, and their kindness in coming to Toronto on such brief visits in order to address the Fellows bespeaks a bright future for the Institution at 9 Queen's Park. Mr. Irving H. Cameron moved a vote of thanks to Dr. Richardson in the following words:

Mr. President,—It is quite unnecessary in this audience to affirm, but still I should like to assure our honored guest, so that he may not carry back a false impression of us, that the Surgical Department of the University of Toronto is not composed of surgeons occupying the questionable borderland which you have made the subject of your strictures. On the contrary, I would desire that the impression of the asperities experienced by the "felloes" at the tire should be so softened and modified in transmission to "The Hub" that he might carry away with him the "Yankee notion" that we are really better than we are. And although I could have wished that it had fallen into abler and better hands to express to Professor Maurice Richard-

son our grateful appreciation of his great courtesy and kindness in sparing time from his much occupation to come so far to read to us his admirable paper on the Borderland of Medicine and Surgery, now that I am on my feet I cannot forbear to say how great a pleasure it affords the Professor of Surgery in Toronto to associate himself with his Brother of Harvard in all the sentiments enunciated in his address. True, it is probable that if there were points of difference I should hardly have the hardihood or the presumption to give them utterance on this occasion, for those who know the great work they are doing in Boston for the advance of scientific surgery fully realize that Toronto, situated at the outer end of the radius, must be content to pursue a parallel and co-ordinate but distant orbit and never hope to approach the centre although it feels the constant tug of its attraction.

Were Professor Maurice Richardson an utter stranger to us, which, of course, a man of his eminence in the surgical world could not be, he would still command the heartiest welcome in our midst on account of three associations: First, as Professor of Surgery in Harvard, and the successor of my highly-esteemed and honored friend, John Collins Warren, of the thrice-illustrious name in Harvard University; secondly, as the Prosector, for six or seven years, of that never-to-be-forgotten ornament of medicine, Oliver Wendell Holmes, whose personal influence as a liberal education the address we have had the pleasure of listening to to-night so abundantly attests; and thirdly, as the assistant of Henry J. Bigelow, whose many contributions to surgery, and not least among them the demonstration of the Y. ligament, which now bears his name, and its influence in the mechanism of hip-joint dislocations and reduction, have laid us surgeons under such a weight of obligation to him. Of Professor Richardson's own achievements I forbear to speak in this assembly. But I would say to him in the words of one of his most distinguished fellow-townsmen, now unhappily gone over to the majority, "It is good for us, O brother, that you came so far to see us." There is a borderland, however, which he did not mention, and my attention was forcibly directed to it by the entrance a little while ago of Dr. Robson, of Liverpool, in company with Professor Rudolf. That borderland is the ground

whereon we stand, a fitting place on which Old England and New England meet. And, indeed, it seems to me that, if the one could raise its tariff wall to a reasonable height and the other sink hers to a reasonable depth, this intervening borderland and the once "unplumb'd, salt, estranging sea," henceforth a bond of union and pontoon of passage, would be all transformed into a level plane of commerce, a veritable aequor, over which the Anglo-Saxon would roam at will, and Englishman to Englishman "the world o'er should brithers be, and a' that." To Professor Maurice Richardson our debt is great, our gratitude commensurable. Of him it shall be recorded in the Annals of this Academy and in the time-honored words of Homer, which I refrain from quoting in their original form, that "being well disposed towards us he has argued and spoken amongst us," and we thank him!

Dr. N. A. Powell seconded the vote of thanks in the following words:

Mr. President and Fellows of the Academy,—There has existed amongst us an impression, reaching in some cases almost to the dignity of an opinion, that, within the confines of medicine, only three really great contributions have come from Boston in the last hundred years. These were, of course, Morton's anesthesia, Holmes' demonstration of the contagious character of puerperal fever, and Fitz' paper on appendicitis.

In the school of medicine, which owes its origin to John Harvard, and its re-animation to Pierpont Morgan, there have been many teachers of eminence. Of its past history we may well say that "there were giants in those days." Recently, when wealth and science were combining to provide marvellous facilities for the giving and for the receiving of instruction it can hardly be denied that a measure of apprehension was felt lest men big enough and broad enough to utilize these facilities to their fullest extent might not be available.

In so far as the department of surgery is concerned, all such apprehension is at an end. We saw Henry J. Bigelow succeeded by Warren, a great surgeon and one of the soundest of surgical pathologists, and he in turn followed by David Cheever, to whose brilliant aphoristic teaching it was at once a delight and an inspiration to listen. To-night we have with us the latest

occupant of the chair of surgery, at Harvard, and all here will agree that no abler, no better, and no safer teaching could be given than that to which it has just been our privilege to listen. So long, at least, as he is spared, to fill his present position, the teaching of surgery will be all that the most critical or the most exacting could desire. He has come a long way to address us. He has given us an address worth going a long way to hear.

The December meeting of the Section of Medicine was held in the Academy of Medicine, Queen's Park, on Dec. 14th, 1909, at 8.30 o'clock. The papers read were as follows:

1. Dr. O. R. Maybee—The Pathology of Lobar Pneumonia.
2. Dr. Allen Baines—Some Points in the Diagnosis of Lobar Pneumonia in Children.
3. Dr. A. R. Gordon—The Treatment of Lobar Pneumonia.

DISCUSSION.

Dr. Machell spoke of the difficulty of early diagnosis, also the necessity for good nursing and good hygienic conditions and guarding against over-medication.

Dr. John Ferguson also emphasized the necessity for good nursing, plenty of pure air, and the best of hygienic surroundings.

Dr. W. J. Wilson said that while water was valuable, it should be given with care in cases of dilatation. The condition of the bowels should be carefully watched and gas not be allowed to increase so as to embarrass the circulation. Belladonna had proved of considerable value. Preference in treatment should be given to fresh air, careful feeding and good nursing.

Dr. Alexander McPhedran—Believes that the death-rate in pneumonia has been lowered. He condemned indiscriminate drugging, also the pneumonia jacket and poultices. The condition of the patient does not depend on the area of lung involved. When death occurs it is usually due to some circulatory condition. He condemned the use of alcohol and nitro-glycerine, but thinks stimulation by digitalis, strychnine, caffeine and strophanthus is valuable. He believed in early venesection where dilatation of right side of heart exists. Also believed in stimulation by application of alternate heat and cold.

Dr. L. S. Webster thinks opiates are of value in early stages of disease where restlessness and delirium are present.

Dr. Rudolf said that while pneumonia is occasionally epidemic yet is, as a rule, not contagious. Believes in use of alcohol in alcoholic patients. Also in use of opiates for sleeplessness in early stage of disease.

Dr. Harold Parsons believes in good effects of oxygen gas when administered regularly and early enough, especially in cases where cyanosis is present. Believes in use of opiates at times. Says that prognosis in children is fairly good.

Dr. Pepler believes in systematic use of digitalis and strychnine.

Dr. Machell thinks hot pack safer and of more value than opiates in children.

Dr. McPhedran also likes the use of the hot pack. Says that chloral hydrate is valuable for irritable conditions.

Dr. Graham Chambers believes the diet to be an important factor, using, himself, a liberal diet in the early stages and a light diet in the later stages of the disease.

Dr. Mabee, in reply, emphasized the fact that pneumonia should be treated as a general infection.

Dr. Allen Baines, in reply, believes in use of oxygen. Also of opium and venesection, both of the latter to be used with great care in children.

Dr. A. R. Gordon, in reply, stated that he also is in favor of the use of opium where indicated. Also in use of oxygen. Does not agree with Dr. Chambers that heavy feeding should be used in any stage of the disease.

Fifty-two members were present. N. K. W.

This month the Academy will be addressed by Dr. Llewelys F. Barker, Professor of Medicine, Johns Hopkins University, Baltimore, a Canadian who, in his work, has done honor to the country that gave him birth.

News of the Month

RETIREMENT OF MISS SNIVELY AFTER TWENTY-FIVE YEARS OF SPLENDID SERVICE

Miss M. A. Snively has resigned her position as Superintendent of the Training School for Nurses of the Toronto General Hospital and has been granted by the Board of that institution as a mark of appreciation of her services a retiring allowance of $700 a year.

This announcement made at a gathering at the hospital on Dec. 2nd, held in celebration of her completion of 25 years of service in that capacity came as a surprise to the 500 guests and friends who attended.

Mr. J. W. Flavelle, chairman of. the Board, occupied the chair.

Mrs. G. N. McPherson, the oldest graduate in the city, on behalf of the Board, the nurses, the visiting staff of doctors and friends, presented Miss Snively with a purse containing $1,000.

The address was read by Lady Pellatt on behalf of the Alumnae Association. This stated that she had rendered inestimable service, raising the standard of the Canadian nurse to a place second to none in the world.

She had found it a labor and made it a profession. When she commenced her duties in 1884 method was unknown and the daily routine of a nurse was characterized by drudgery.

Miss Snively thanked them heartily for the signal mark of appreciation of her services.

Mr. J. W. Flavelle also expressed the high regard in which Miss Snively was held by the Board. She had approached the Board a year ago and asked to be relieved, but was asked to reconsider the matter and remain a few years longer. This year she again asked for relief as the burden was becoming too heavy. No time was set for her resignation going into effect but she wanted to leave next June.

A large number of people were present at the presentation, including President Falconer of Toronto University, and Mrs. Falconer, Mrs. J. W. Flavelle and Miss Flavelle, Mr. and Mrs. W. E. Rundle, Mr. and Mrs. P. C. Larkin, Dr. J. N. E. Brown, superintendent General Hospital, and Mrs. Brown, Mr. and Mrs. Reginald Pellatt, Dr. and Mrs. H. C. Scadding, Miss Brent, superintendent Hospital for Sick Children, Miss Matheson, Supt. Isolation Hospital, Miss Underhill, superintendent Home for Incurable Children, and a large number of other ladies and gentlemen, and nurses who have been trained under Miss Snively.

WAS VOTE LEGAL BY THE DOCTORS?

Are all the acts of the Medical Council passed at the sittings just concluded illegal?

That is the question A. R. Hassard on behalf of Dr. W. R. Cook, whose name has been stricken off the list of medical practitioners, is endeavoring to decide.

"I haven't had time to look into the matter fully," he said to The Star this morning, "but I am of the opinion that everything that the council did is illegal because men voted at the council who should not have been given seats under the Act.

The Act says that a member is to be chosen from the University of Toronto, Queen's University, the University of Victoria College, the University of Trinity College, and several other educational bodies."

Changes Since Then.

"That is the way the Act reads to-day, but it was made a number of years ago, and since then the University of Victoria and the University of Trinity College have been done away with. They used to be separate institutions, but some time ago both of them were affiliated with the Toronto University, and so have lost their identity. My contention is that as a result of the amalgamation Toronto University alone is entitled to a representative on the council and not Victoria and Trinity.

"F. N. G. Starr represented Victoria and A. J. Johnson,

Trinity. If they should not have been present as the Act decides, then their votes were illegal and even one illegal ballot is sufficient to upset the doings of the council."

Mr. Hassard will use the argument when he applies to the Divisional Court on an appeal from the council's decision in the case of Dr. Cook.

Still Have Right.

J. W. Curry, K.C., counsel for the council, stated that he had not been asked about the matter yet, and speaking in an off-hand manner stated that he thought the representatives of Trinity and Victoria were entitled to vote at the council. The fact that they are affiliated with Toronto University, in his opinion, does not take away their right to be represented.

"Even if they should not have voted the vote was still enough to have carried the decision in the Dr. Cook case." he said.

The difficulty over the seating of the members came up at an early meeting, but as everyone seemed to be of the opinion that the representatives of the colleges in question were entitled to be present, the matter was not gone into fully.

If Mr. Hassard's contention proves to be the correct one then the council will have to go over the same ground again, as all it did would be unconstitutional.—Toronto Star.

CANADIAN WOMEN DOCTORS

A glance at an early register of the Ontario Medical College reveals the fact that Jenny K. Trout was the first woman licensed to practise medicine in Ontario. Dr. Trout is the wife of Edward Trout, for forty years publisher of the *Monetary Times*. The list of early women graduates follows:

Jenny K. Trout, May, 1875.
Emily H. Stowe, August, 1880.
Augusta Stowe Gullen, April, 1883.
Alice McGilvary Corliss, Australia, April 29, 1885.
Margaret Corliss, Australia, April 29, 1885.
Helen E. Reynolds, Kingston, April 29, 1885.
Marion Livingstone, Mount Morris, N.Y., May 11, 1887.

Susie Carson, China, May 8, 1888.
Elizabeth Embury, Belleville, May 8, 1888.
Allie A. Lawyer, May 8, 1888.
Mary C. B. McKay, Stellarton, N.S., May 8, 1888.
Alice McLaughlin, May 8, 1888.
Annie L. Pickering, May 8, 1888.
Opia Sisley, Agincourt, Oct. 25, 1888.
Isabel McConville, Kingston, May 22, 1889.
Lelia Ada Davis, Toronto, Oct. 29, 1889.
Susanna Peep Boule, United States, May 22, 1890.
Minnie Brown, May 22, 1890.
Clara Demorest, Melita, Man., May 22, 1890.
Emily J. Irvine, Woodstock, Oct. 30, 1890.
Ida Eliza Lynd, Toronto, May 22, 1890.
Mary H. McDonell, Hensall, May 22, 1890.
Maggie McKellar, India, May 22, 1890.
Emily J. Smith, Woodstock, Oct. 30, 1890.
Hattie A. Walker, May 22, 1890.

Besides these there are about fifty more lady graduates in Ontario.

ITEMS

A Grand Prize (Highest Award) has been conferred upon Messrs. Burroughs Wellcome & Co. for their exhibit of 'Tabloid' and 'Saloid' brand products and 'Wellcome' brand Chemicals. at the recent Alaska-Yukon-Pacific Exposition, held at Seattle.

The Medical Profession of Canada will be interested to learn that one of the large English manufacturing pharmaceutical houses in the personality of Messrs. C. J. Hewlett & Sons. Ltd., of London, a firm who have been making high-class proprietary medicines for nearly 80 years, have registered at Ottawa their different preparations under the new Canadian Patent and Proprietary Medicine Act which came into force last April. The Canadian profession can therefore have increased confidence in this firm's goods and may depend upon it that they are of the best and purest materials.

The Physician's Library

If the readers of this issue will turn to page lxi, they will notice an important 2-page announcement of Messrs. P. Blakiston's Son & Co., medical publishers, Philadelphia. This firm have been publishing medical works for a great many years past and have made for themselves a most enviable reputation. The books to appear most recently from The Blakiston Press include:

Gatewood. Naval Hygiene. By James Duncan Gatewood, M.D., Instructor in Naval Hygiene, United States Naval Medical School, Washington. With eight Colored Plates and 105 other illustrations. Octavo. xiv + 779 pages. Cloth, $6.00; half morocco, $7.50.

Gould. Biographic Clinics. By George M. Gould, A.M., M.D. Complete in six handsome volumes. Price of each volume, cloth, $1.00. Vol. VI.—Essays Concerning the Influence of Visual Function, Pathologic and Physiologic, upon the Health of Patients. 12mo. viii + 492 pages.

Knight and Bryant. Diseases of the Nose, Throat and Ear. By Charles H. Knight, M.D., Professor of Laryngology, Cornell University Medical School; and W. Sohier Bryant, M.D., Adjunct Professor, Department of Diseases of the Ear, New York Post-Graduate Medical School and Hospital. Second Edition Revised and Enlarged. Octavo. xix + 631 pages; 239 illustrations. Cloth, $4.50.

Tyson. The Practice of Medicine. Fifth Edition, Revised. By James Tyson, M.D., Professor of Medicine in the University of Pennsylvania. Fifth Edition, Revised and Enlarged. 5 Plates and 245 other illustrations; 13 in colors. Octavo. xxv + 1438 pages. Cloth, $5.50; half morocco, $7.00.

Potter. Therapeutics, Materia Medica, and Pharmacy. Eleventh edition, enlarged. Including the Physiological Action of Drugs, Special Therapeutics of Diseases and Symptoms. By Samuel O. L. Potter, M.A., M.D., M.R.C.P. (Lon.), formerly Professor of the Principles and Practice of Medicine, Cooper

Medical College, San Francisco. Eleventh Edition, Revised and Enlarged in accordance with the latest reprint U. S. Pharmacopeia. 8vo.; xix + 937 pages. With Thumb Index in each copy. Cloth, $5.00; half morocco, $6.50.

Rockwood. Chemical Analysis. Introduction to Chemical Analysis for Students of Medicine, Pharmacy and Dentistry. By Elbert W. Rockwood, M.D., Ph.D., Professor of Chemistry, Toxicology and Metallurgy in the College of Medicine, University of Iowa, Iowa City. Third Revised Edition. Illustrated. 12mo.; ix + 242 pages. Cloth, $1.50.

Webster. Diagnostic Methods, Chemical, Bacteriological and Microscopical. By Ralph W. Webster, M.D., Ph.G., Asst. Professor of Pharmacologic Therapeutics, and Instructor in Medicine, Rush Medical College (Medical Department, University of Chicago); xxxiv + 641 pages, with 37 Colored Plates and 164 other Illustrations. Cloth, $6.00; Half Morocco, $7.50.

Beard. Treatise on Ophthalmic Surgery. By Charles H. Beard, M.D., Surgeon to the Illinois Charitable Eye and Ear Infirmary (Eye Department), Octavo. With over 250 Illustrations. In Press for early publication.

Binnie. Operative Surgery. A Manual for Practitioners and Students. By John Fairbairn Binnie, A.M., C.M. (Aberdeen); Professor of Surgery, Kansas State University. Fourth Edition, Revised and Enlarged. The Leather-Bound Series of Manuals in two volumes. Vol. II.—Vascular System, Bones and Joints, Amputations. 550 Illustrations. Full Limp Leather, Gilt Edges, Round Corners, $3.50.

Attention is called to the announcement of the Canada Law Book Company, of this city, appearing on page xlvi of this issue. This firm are offering a number of the latest books from the Oxford Press, at a most attractive discount, their reason for so doing being that they are giving up their medical book department. It would seem to be the chance of a lifetime. The books include: "Diseases of the Larynx," by Harold Barwell, M.B. (Lond.), F.R.C.S. (Eng.). "Treatment of Diseases in Children," by G. A. Sutherland, M.D., F.R.C.P. "Surgical Emergencies," by Percy Sargent, M.B. (Cantab)., F.R.C.S. (Eng.). "Skin Affections in Childhood," by H. G. Adamson, M.D., M.R.C.P. "Heart Disease, including Thoracic Aneurism,"

by F. J. Poynton, M.D., F.R.C.P. "Practical Anesthetics," by H. Edmund G. Boyle, M.R.C.S. "Diseases of the Male Generative Organs," by Edred M. Corner, M.C. (Cantab.), F.R.C.S. "Diseases of the Ear," by Hunter Tod, M.B., F.R.C.S. "Diseases of the Nose and Throat," by E. B. Waggett, M.B. (Cambridge). "Auscultation and Percussion, with the other methods of Physical Examination of the Chest," by Samuel Jones Gee, M.D., F.R.C.P. "Medical Lectures and Clinical Aphorisms," by Samuel Gee, M.D., F.R.C.P. "Clinical Lectures and Addresses on Surgery," by C. B. Lockwood. "A Manual of Venereal Disease," by Officers of the Royal Army Medical Corps. "Functional Nervous Disorders in Childhood," by Leonard Guthrie, M.D., F.R.C.P. "Operations of General Practice," by Edred M. Corner, M.C. (Cantab.), F.R.C.S. "Enlargement of the Prostate," by Cuthbert Wallace, M.S., F.R.C.S. "Cancer of the Womb: its Symptoms, Diagnosis, Prognosis, and Treatment," by Frederic J. McCann, M.D. (Edin.). As these books are bound to go quickly, our readers had better phone Main 346, in order to secure what they need.

A System of Ophthalmic Therapeutics, being a complete work on the non-operative treatment, including the prophylaxis, of diseases of the eye, edited and chiefly written by Casey A. Wood, M.D., C.M., D.C.L., late Professor of Ophthalmology, Northwestern University Medical School; ex-President of the American Academy of Medicine, etc. Chicago: Cleveland Press. 1909.

One wonders how a book of 926 pages is needed to deal with the subject of ophthalmic therapeutics, but a "system" is supposed to be complete or nothing, and the editor is evidently determined that it shall be complete. One scarcely expects to find in a work on ophthalmic therapeutics a chapter given up to a scheme for the systematic examination of the eyes of school children, or one on the examination of corporation employees. In Chapter VIII., the use of electricity in ophthalmic practice, a number of pages are given up to the relation of the details of illustrative cases.

There is a good deal of repetition; necessarily so, as Dr.

Wood first deals with the remedies used in eye diseases, taking them up in alphabetical order; later on he treats of eye diseases with the remedies used for each disease.

This plan has, even though prolix, the advantage that but little of value can escape consideration, for a work of this type a complete and comprehensive index is essential. Sixty-seven pages are given up to the index.

As a work of reference, and as a monument of industry and thoroughness, this book will always be held in high esteem.

M.

Soured Milk and Pure Cultures of Lactic Acid Bacilli in the Treatment of Disease. By GEORGE HERSCHEL, M.D. Second Edition. London: Henry J. Glaisher. Chicago: Chicago Medical Book Co., 1909.

This volume of seventy-two pages, in its second edition, deals in a concise fashion with certain clinical and bacteriological aspects of the soured-milk question. It has been said recently that since the slight abatement of the psycho-therapeutic craze the soured-milk problem, or the Metchinhoff treatment (as it is popularly designated) has come to the fore, especially in the minds of the laity, thanks to judicious advertising. This being taken as true, it is well to have a review of the exact status of affairs. This the author does very well. The clinical aspect gleaned from the work of Combe, Arbuthnot, Lane, Charrin, Schmidt, and Strassburger, and his own experience, is well presented. The most recent bacteriological literature, including a comprehensive study by Heinemann and Hefferan is also referred to and the salient points elucidated. The conditions or symptoms likely to be benefited by treatment with soured-milk are given and one is impressed with the honest endeavor on the part of the writer to point out that the lactic acid bacillus is not a panacea but that it has a distinct field of usefulness.

In conclusion the reviewer can cheerfully recommend this little work to the medical man who is desirous of becoming au fait with the situation in this particular therapeutic field. Certain improvements in a later edition will add to the value of the book. For instance, illustration B, under figure 8 is blurred and of little value. A typographical error on page 9 in the foot-

note where Wochenschrift is spelled Soshenschrift, and a statement on page 56 to the effect that neurasthenia is sometimes the first stage of melancholia or general paralysis, might easily be questioned. J. G. F.

Clinical Memoranda for General Practitioners. By Alex. Theodore Brand, M.D., C.M., and John Robert Keith, M.D., C.M. London: Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden. 1909. (All rights reserved.)

This little work of 207 pages is intended for general practitioners and especially the younger members of the profession.

The work is divided into four parts, viz., Medicine, Surgery, Obstetrics, and Gynecology and Therapeutics.

All kinds of questions are referred to under their respective headings, and we are bound to say a perusal of them will often prove a great help to the young general practitioner. It is a good book for the office desk, where it can be often referred to. The references are so short and to the point that one can look up what he wants in a few minutes. W. J. W.

Text-Book of Modern Materia Medica and Therapeutics. By A. A. Stevens, M.D., Professor of Therapeutics and Clinical Medicine, Woman's Medical College, Philadelphia. Fifth revised edition. Octavo of 675 pages. Philadelphia and London: W. B. Saunders Company. 1909. Cloth, $3.50 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

Although there have been few changes made in this edition compared with the Fourth Edition, the work as a whole has been thoroughly revised and contains many important modifications and considerable additions and the latest drugs described.

A. J. H.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXVII. TORONTO, FEBRUARY, 1910 No. 2

Original Contributions

THE RADICAL MASTOID OPERATION AND ITS TECHNIQUE*

BY D. J. GIBB WISHART, M.B.

Associate Professor of Laryngology, University of Toronto; Senior Surgeon, Department of Oto-Laryngology, Toronto General Hospital.

I prefer to have my patient enter the hospital at least twenty-four hours prior to the operation, to allow time for a thorough bacteriological investigation of the discharges, which is made as far as possible in every case, and frequently throws light upon complications that may arise. The condition of the blood is also investigated, the eyes are examined, the physical condition is fully ascertained, and a four-hourly chart of the temperature kept by the nurse.

The evening previous the side of the head is shaved sufficiently to allow of the most extensive operative procedures, the hair at the edge of the field of operation is fixed upwards by a thick layer of collodion so that wandering hairs may not fall upon the disinfected field, the external canal is thoroughly cleansed, and a drain of gauze saturated in bichloride solution inserted. The skin of the entire side of the neck, mastoid, temporal region, ear, forehead, face, and nose is washed, scrubbed

* Read before the Canadian Medical Association at Winnipeg, August 25th, 1909.

and treated with gasoline and alcohol and covered with aseptic dressing and bandage, which are not removed until the operation is about to commence.

Upon entering the operating room the patient must be so placed upon the table that the field of operation, even if the jugular required to be dissected, is convenient to the operator. For this purpose a sand pillow is placed under the shoulders, so that the head, which is turned to the side, may drop a little downwards and the chin be elevated.

When the dressings are removed the head is covered by a cap, or, as I prefer, by a damp towel placed underneath it, the loose ends being brought up and snugly pinned across the forehead, so as to thoroughly cover every hair and leave the field completely exposed. The use of the towel has this advantage, that if the head be required to be moved it can be firmly grasped without danger of everything slipping.

Moist towels are also laid across the posterior and inferior borders, but the face and nose are kept uncovered, so that no contraction of the facial muscles may escape attention.

After trial of several methods of illumination, I have adopted with entire satisfaction, for the past year, Alexander's modification of the Klar Electric Head Light. This has several distinct advantages over all others, namely, that it has little weight, gives absolutely no heat, is so adapted to the eyes that the operator looks directly down the path of light, and admits of being focussed to the distance which suits the vision of the operator. I cannot be too emphatic in acknowledging the great assistance that this light has been to me. A perfect illumination of the field is an essential, if one is to avoid the dangers which surround the exploration of the editus and the middle ear.

In all my operations I prefer the assistance of a trained anesthetist. This is not always possible, but I believe that we are doing better for our patient, better for ourselves, and better for the family physician, if we insist upon this point, and I am convinced that the day is coming when this will be generally realized. The operator should be able to focus his attention entirely upon the work directly before him, and where he has any doubt of the capacity of his anesthetist this is impossible

and accidents must supervene. To the trained anesthetist you may safely leave the choice of anesthetic and bear an easy mind. One may digress here to remark that the public are apt to place too slight an estimate upon the dangers of anesthesia, and this leads to the difficulty which the anesthetic specialist meets with in securing competent fees.

For removing the blood I employ sponges made of gauze folded to a size about two inches square, which are used in the larger incisions. For the deeper parts cotton wipes about the size of a stone marble and tips are used; an abundance of these should be of ready access, and a nurse detailed to handle these only.

I am not wedded to any particular set of instruments, but I use chiefly the Alexander gouge, the McEwen chisel, and McKernon's and Richard's curettes. The hammer I employ is the heavy lead filled and faced, short and solid handled mallet, for which I have long discarded all others of lighter make, because it enables me to remove the bone with a very light stroke. I have never used the burr with any confidence, because it appears to conceal the field at the very point where absolute clearness is needful. Two probes are necessary, one of which may be usually found in a surgical dressing case, but the other must be a fine malleable ear probe capable of entering the smallest fenestræ.

In the earlier stages of the operation retraction may be obtained by the use of two (Allport's) retractors, but a variety should be on hand, and the trained hands of an assistant will always be found most effectual. In a radical operation a piece of gauze tape may be inserted through the flap incision, or through the auditory canal backwards under the free edge of the lining of the external auditory canal, after this has been well freed from the bone at the tympanic ring. Two or three fine Barth's curettes, forceps, and periosteal elevators should be on hand, for the investigation of the inner wall of the middle ear and the eustachian tube. Two angular ear dressing forceps are required for the application of the wipes to the deeper parts of the wound.

It is a matter of indifference to me whether I stand above or below the wound, but my chief assistant must be opposite, and the instrument table within reach of the operator and in

charge of a special assistant or nurse, who must clean each tool as it is laid down, and replace it in the position as originally arranged by the operator.

The anesthetist sits opposite to the face, and must be trained to detail accurately the finest facial vibrations.

One nurse must handle the sponges and dressings. All of the above must be sterile and wear caps; gloves may or may not be used. An unwashed nurse must be in attendance to pick up fallen instruments and attend to other duties that may arise.

My usual incision is in a curved line, three-sixteenths of an inch behind and parallel with the furrow between the auricle and the side of the head. beginning just above the front part of the external auditory canal and extending right down to the tip of the mastoid. All tissues down to the temporal muscle are incised with one cut, and with a second everything superficial to the bone below the border of that muscle. I prefer to leave the temporal muscle uncut wherever possible, and instead to push it upwards. If the incision be long enough it will seldom be necessary to make a horizontal cut to gain more space. I have also used an incision with a one-half curve, leaving a large flap posterior to the auricle, but for cosmetic purposes I prefer the other. Again, in doing a Heath I have made the incision directly in the furrow, and have uniformly been satisfied with the result. Lake's incision with the blade placed in the external auditory canal parallel with and close to the tragus, cutting upwards through the cartilage and then sweeping outwards and backwards, I have used with success in children; it affords an excellent view of the parts and leaves a practically inappreciable scar.

The bone is now thoroughly denuded of periosteum to an extent which embraces the roof and posterior wall of the external auditory canal, and below the posterior zygomatic root, backwards as far as the posterior border of the mastoid and downwards over the tip, and the bone is then carefully searched with the probe for any opening through the cortex, and if one is found it is enlarged, but if absent the antrum is sought through the supra-meatal triangle. The antrum must be searched for diligently, and in all my experience it was not until a few days ago that I met with a case where it was con-

clusively absent. No variety show is comparable in its frequent surprises with the exploration of a mastoid bone. The antrum is high or low, anterior or posterior, deep or superficial, outside, in front of, and interior to, the knee of the sinus, without presenting any indication externally.

The absolute absence of blood from the field, the constant use of the probe, vigilant watchfulness, and careful direction of the instruments are absolutely essential in every step of this search. When once the antrum is found, however, the way is clear. All suspicious bone may be removed freely. I never hesitate to expose either the sinus or the middle fossa to the freest extent, and have never found this interfere with the progress of healing. Sometimes one has to follow cellular structures away behind the sinus or in to the zygomatic process and outer plate of the middle fossa to a surprising extent, but I have always found the reward of diligence in this direction satisfactory.

It is not difficult to deal with the tip; no accident to the nerve need be feared where care is exercised to remove the fibres of the adhering muscles as close to the bone as possible. In doing this I once had a severe hemorrhage, for which, through lack of proper assistance, I was compelled to tie the carotid.

The removal of the bridge and the outer wall of the attic is next effected with the use of the chisel, and I have abandoned the use of the Stacke protector, because of its liability to dislocate the stapes, nor have I ever injured the facial nerve during this procedure. I always, however, accurately ascertain the direction of the aditus by the use of the fine ear probe curved at the tip, which I employ as a searcher, and which, being much smaller than the passage, can do no harm.

The aditus, the projection of the semi-circular canal, and the entire inner wall of the ear with the eustachian tube, can now be examined if all the debris and contents thereof be removed. Care must be taken in this removal lest the pyogenic membrane, polypi, etc., be connected with the facial nerve through some hiatus in the wall of the fallopian canal. Frequent use of the probe in the region of the horizontal portion of the nerve is necessary until the operator is convinced that the inflammatory products are entirely removed, and here again

the attention of the anesthetist to the facial movements must be alert.

The mouth of the eustachian tube should be carefully cleansed, and I employ a raspatory, with the intention of securing sufficient reaction in the tube to secure its closing. The wall of the inner ear may then be made as smooth as possible, by lightly scraping any projecting ridges, but the region of the stapes should be carefully avoided. The epidermatization of the tympanum will be materially hastened by smoothing away the projections.

The final steps may now be proceeded with, the aim thereof being still further to favor smoothness of surface and rapidity of healing. For this purpose the posterior wall of the canal may be removed to whatever extent will insure the protection of the facial nerve. All overhanging edges of the outer plate are removed and the slopes rendered round and gentle, and all unevennesses in the floor of the cavity smoothed. During the above steps it is the duty of my assistant to keep the most dependent parts of the cavity quite free of blood, and this must be done with care, for the exercise of undue pressure with the forceps may break into the sinus or the facial nerve. It is also his duty to pick out all fragments of bone as fast as they are separated. Adrenalin and peroxide of hydrogen will assist if the oozing be very free, but any delay is preferable to proceeding in a blurred field.

Unless the cavity has been very foul or the bone very porous I do not use any cleansing solution, but where needful I employ a douche of sterile water, hydrogen peroxide, or alcohol, in preference to bichloride or carbolic acid solution.

If the flap has not already been made, this is now done. The Y flap or the T flap I employ indifferently, endeavoring, however, to secure a capacious canal which will allow of the freest access and leave no deformity. If the cartilage be required to be cut, none of it should be left in the flaps, which are cut with a long under or a long lower, according to the exigencies of the case, cleaned of superfluous tissue, and fixed back with a concealed chromcized stitch of catgut. The wound is then moderately tightly packed with a long strip of half-inch wide iodoform gauze, especially prepared with selvage edge,

brought out through the external ear, and the posterior wound is entirely closed by silkworm stitches, the ends of which next the auricle are cut very short so as to avoid irritation.

If the tip has been removed, it is often wise to insert a small gauze drain at the bottom of the incision, and I have at times brought the gauze out into the external auditory canal through a short piece of thick-walled rubber drainage tubing. My colleague and assistant, Dr. Chas. E. Stewart, uses a glass meatal tube for this purpose, with which I have not yet experimented, but which would seem to be highly useful.

The towels are now removed, and all traces of blood removed from the wound, head and neck, the cut sprinkled with bismuth formic iodide, and a thin strip of iodoform gauze laid over the stitches; a dressing of shaken-out gauze is then arranged around the auricle so as to prevent it being squeezed into an uncomfortable position when the bandage is applied, and over this is placed, especially over the lower side, several large pads of gauze folded over absorbent cotton. The bandage is applied firmly, so as to leave the sound ear uncovered and without turning it around the neck; the bandage should be brought downwards over the wound, not upwards, to secure the best adaptation. It is perfectly possible to apply this bandage so firmly that it will withstand the most violent movements of the patient's head, and yet without undue tightness or any complaint of discomfort from the patient. The turning of the bandage around the neck below the chin I always consider as the mark of the untidy surgeon.

As soon as the patient returns to the ward and recovers from the anesthetic, a quarter-grain of morphia is given hypodermically.

The outer pads may be changed daily, but the wound itself not touched for three or four days or longer, provided the patient's temperature is satisfactory. Once the packing is removed, which must be done the first time by the surgeon himself, the wound should be dressed daily, and sterilized gauze used for packing. I am accustomed to adapt the firmness of my packing to suit the conditions of the granulations covering the bone, but in doing this packing, and in examining these granulations, it is necessary to employ the head mirror and good

illumination, otherwise pockets will form in healing and epidermatization be delayed.

Rapidity of healing after an operation depends upon two factors—the recuperative powers of the patient, and the carefulness with which the toilet of the cavity of the ear is attended to. In this connection, although apart from the question of operation, this carefulness of dressing will prevent undue thickening of the epidermis over the foramen rotundum, and around the stapes, if that be in place, and greatly increase the possibility of improved hearing, which the operator should seek.

47 Grosvenor St., August 10th, 1909.

MEDICINE VERSUS A CRIMINAL ACT.

BY JOHN HUNTER. M.B., TORONTO.

Many thoughts, some of which need not be recorded, must have passed through the minds of medical men as they read the recent articles in the lay press concerning the attitude of the Medical Council toward those guilty of the act known as criminal abortion. The attitude of medicine toward this act can be discussed under the following heads:

I.—The mission of medicine.

II.—The means by which it has been propagated.

III.—Factors involved in this criminal act.

The mission of medicine can be summed up in a short paragraph. It is the prevention, mitigation of the consequences, and cure of disease. It stands for purity in morals; temperate and cleanly habits. It seeks the enactment of sanitary laws for the protection of private, social, industrial, civic and national life. It has to solve the many complex problems pertaining to heredity, education, climate, vocation, etc.

The propagation of medicine will be, when written, one of the most unique and fascinating stories in the realm of literature. Despotic rulers, military and political adventurers, have sought universal empire by the arbitrament of the sword. The vanquished have been either ruthlessly slain, chained to the chariot wheels, or degraded as slaves. Ecclesiastic authority has not hesitated to resort to the dungeon, executioner's ax, to the faggot, and the savage beast, in order that all men might be compelled to bow at the same altar. Commercial and industrial avarice has violated laws in order to fill its coffers by crushing out legitimate competition. Even literary genius has been known to resort to piracy for mercenary or selfish purposes. Medicine has invoked none of these malevolent influences. It has acquired a kingdom vaster than despotic ruler, military or political adventurer, ever dreamed of. It acknowledges no political boundaries, racial or climatic limitations. Its teachings are accepted with a faith more sublime than that accorded to any ecclesiastic creed or dogma. Christ—the Preacher—was driven to the cross

by sectarian blindness and malice; whereas, Christ—the Physician—was thronged by a multitude, whose faith was so strong that it required but a "touch of the hem of his garment" to restore the hopelessly sick and disabled to the full measure of health and strength again. It exercises an authority superior to that of high court or national parliament. It requests a king to submit to an operation, and without judicial or legislative mandate, the royal body is bared for the surgeon's blade. It enters private life and says to the individual, "You have a contagious disease and you must be isolated from your fellows," and without a word of remonstrance, he passes into a secluded chamber, or hospital. It goes into the home and places its restrictions on the life of husband, wife or child. It selects the soldiers and regulates their lives. It places its ensign—the Red Cross—on the battlefield, and that spot becomes neutral ground. The guns of the conflicting hosts are aimed elsewhere.

This world-wide expansion and matchless power and influence have been acquired without a single appeal to the sword or interference with any creed, or resort to cupidity. How has all this been brought about? Ages before the first line of history was written, men began to study the mystery of disease, and throughout all the centuries that have since intervened, there have never been wanting those who were not only willing to study disease, but ever ready to apply their knowledge and experience to alleviate suffering. This attitude on the part of medicine has won for it the respect and confidence of the people of every age, race, and zone. It places, unreservedly, its knowledge, skill and experience at the service of all; even the poorest pauper, or vilest outcast is not turned away. The cry of suffering never pleads at its door in vain. It rules mankind through the benevolent service it renders.

Factors involved in the act of criminal abortion: From the days of Onan down to the present time, men and women have sought, by one excuse or another, to escape the responsibilities of parentage. In married life, the physical suffering and mental anguish associated with child-birth; the disability to engage in social functions caused by pregnancy; the absence of love for children; or the heavy financial burden incident to the rearing of a large family; any one or more of these are to many husbands and wives irresistible temptations to resort only too often to the

act of procuring criminal abortion as a means of escaping from parental obligations.

In single life, they may be the victims of defective moral training, of thoughtlessness, of evil companionship, of poverty, of indolence, of ignorance, or of cruel deception under promise of marriage. If to these be added the sufferings of childbirth, the shame of illegitimacy, and the ominous outlook for both mother and child, the temptation to resort to a criminal act is made many-fold greater in single than in married life.

With the sexual instinct so strong; with temptations thickly strewn in everyone's pathway; with defective home and school training; with, only too often, a very meagre supply of moral ballast, is it to be wondered at that the victims of the criminal abortionist are so numerous?

In regard to this criminal act, two problems confront every physician, viz.: (1) the attitude of reputable scientific medicine towards this act, and (2) what can be done to prevent medical men from resorting to it? The answer to the first does not admit of any two opinions. The attitude of scientific medicine is now, and always has been, this, viz., that fœtal life is never to be interfered with unless morbid physical conditions imperatively demand such interference. The destruction of the human embryo for selfish or mercenary purposes takes rank with the most cowardly and debasing of murders. Murder is usually committed, under abnormal conditions. The perpetrator is frenzied by passion, or drink. But criminal abortion by a physician is a deliberate plot, concocted by at least two, and often with others accessory to the crime. Few acts, if indeed there be any others, have a more debasing effect on social life than this one. If the victim escapes with her life she can never blot out the stain of the crime from her conscience. As for the professional abortionists, they may be able, for a time at least, to escape the gallows or the penitentiary; but so long as they possess a particle of self-respect or regard for the honor of their profession, they cannot escape the gruelling remorse of conscience that ever haunts them. They are the lepers of the medical profession. These wretched parasites are denounced and despised by every reputable medical man.

Remedial Measures.

It is a very difficult task to condense into a few sentences what would easily make a long article. The means that have been suggested are about as varied as are the opinions on any debatable subject. From what has already been said in regard to the mission of medicine, and the method of its propagation, it is very evident that it is against the very genius of medicine to exercise punitive functions. Whether a man breaks his arm in the act of murder or in trying to save another's life, the mission of the surgeon is exactly the same. The physician cannot even appeal to the *"lex talionis,"* for no matter how unjustly the patient may have acted, if the physician undertake to treat him, he is in honor bound to give the best service within his power. The prosecution of the blatant quack by the Medical Council is not in the interest of medicine itself. Its true purport is to protect the public from gross imposition. The abortionist, in his dastardly work, violates a legal statute and becomes amenable to the court of retributive justice. The mission of medicine is not the pursuit of the professional abortionist, but to educate its members so that every one of them will know that the act is one of the most infamous and detestable of crimes. If every young man and woman entering the ranks of the profession during the coming quarter century would take his and her stand on the side of reputable medicine, its escutcheon would be saved many a vile stain. A stern attitude against the crime, by our colleges, our medical press, and by the rank and file, would soon make the criminal abortionists so disreputable that they would either have to give up their fiendish work, or become ready subjects for the prison. The leniency shown by the profession toward this crime is a potent factor in its perpetuation. The abortionist performs the act, and then tells his victim: "Now, if anything goes wrong, call in your family physician. If he does suspect anything he won't say much about it, as you can tell him what a disgrace it would be to your family, etc., etc." Let the criminal abortionist find that his acts are altogether outside the bounds of professional sympathy, and he will soon recognize that his work is of an extremely dangerous character. Older physicians should strive to have this fact indelibly stamped on the consciences of their more youthful confreres,

viz., that the act of criminal abortion is never the "dernier resort" for even unmarried persons. Any physician who has been in practice for a number of years can easily multiply instances where sympathy, tact and wise instructions—in the case of the married—have sent these women to endure their pregnant state bravely, and to give birth to children for whom in after years they would gladly lay down their own lives. In the case of the unmarried, the counsel of the physician has brought about many a happy marriage, or the girls have met their fate heroically, and have made homes for themselves and their children. Of all the influences that can come into any community for good, none excels that of the cultured young physicians, who reverence Christianity, character, race and profession. Young people who are reticent toward the minister, or others capable of giving good advice, are almost invariably willing to give their confidence to the young physician. This very fact places a tremendous power in his hands, and a very stern responsibility on his shoulders. What the race is to be morally and physically depends very largely on the character and attainments of the medical profession. The intemperate, immoral, foul-tongued, unscrupulous physician is as deadly a poison to the moral and physical well-being of society as septic matter is to the structures of the body. What is there in the life of the criminal abortionist to entice any reputable young physician to it! The crime is a cowardly, heinous, dangerous one. The pay is no compensation for such a crime and for such risks. He implicates others in a crime, the stain of which they can never wash away. The end of the abortionist's life is usually closed in poverty, disgrace and imprisonment. How very different the end of the life of unsullied rectitude is, as seen so beautifully portrayed in the case of each of two of the immortals in Biblical and secular literature—Paul, "I have fought the good fight, I have finished the course, I have kept the faith; henceforth there is laid up for me the crown of righteousness, which the Lord, the righteous Judge, shall give me at that day," and Tennyson,

"Sunset and evening star and one clear call for me,
And may there be no moaning of the bar when I put out to sea."

THE STIMULANT GROUP.

BY WILLIAM F. WAUGH, M.D., CHICAGO.
Dean and Professor of Therepeutics, Bennett Medical College, Chicago.

Stimulation is justly regarded as the first principle of therapeutics. What is there more natural than the conviction that as the vital powers fail, the ability to work and to enjoy the fruits of labor decline, and the continuation of life itself becomes questionable, we should seek for the means of sustaining the vigor of our bodily forces? No matter how uninviting the circumstances or how dreary the prospects, sane man clings to life and shrinks from the plunge into the unknown Beyond.

But what is the stimulant, that wonderful weapon that parries the thrust of Azrael's sword, revivifies the fainting forces and sends the vital stream rushing through the nutritive channels with renewed vigor? A century ago the answer would have been prompt and unanimous—it is alcohol—that potent spirit to which the French still apply the term—water of life—*eau de vie.*

The thorough and precise investigations of modern science have shown that alcohol is not a stimulant in any sense, not a food, not an eliminant; in a word, not an agent that is capable of sustaining life or increasing any one of the essentially vital functions. It is a sedative, from first to last, physically, mentally and morally. It is the most potent agency in existence of all that tends to shorten life by inducing early decay, opening the door to infectious disease, and weakening the vital resistance to all noxious influences. It is the Captain of Death before whom all others bow. To what, then, are we to attribute the well nigh universal belief in its stimulant powers? What *does* alcohol that it should have acquired such repute?

Firstly, we may attribute its vogue to ignorance of what constitutes stimulation. Alcohol abolishes the sense of fatigue. and the actual loss of physical force is overlooked; it inhibits judgment and self-consciousness, releasing imagination from the restraint that confines it to proper limits; it blunts the sense of wrong and frees the sinner from the control of conscience. It is curious how uniformly this paralyzing effect may be traced throughout the body, in all cases giving an apparent

stimulation while the real depression is masked. Alcohol increases the appetite while it inhibits the digestive enzymes; sooner or later replacing food, the quantity consumed declining as the patient substitutes alcohol. It apparently increases the elimination of nitrogenous toxins by the kidneys, but these are now known to be derived from the food having slipped by the liver while this organ is fully occupied in the task of intercepting the alcohol and excreting it. Meanwhile the food toxins traverse the body, to its detriment, and appear in the urine.

The conception of alcohol stimulation is enhanced by its local irritative qualities, as when applied in strength to the skin or the mucosa. Irritation is not stimulation; it is not an increase of a vital function so much as a protest of outraged nature at a physiologic insult. Nevertheless, if alcohol is ever correctly to be described as a stimulant, it is when thus applied.

The most potent factor in winning this undeserved reputation is the paralyzing influence of alcohol upon the vascular tension. By this the vessels are unlocked, the circulation is relaxed and more blood admitted into areas where the supply had been previously scanty. Local stimulation also by reflex action accelerates the heart-action, and for a time it *looks* like stimulation. But this quickly subsides, and the depression is unmistakable.

In addition we have the curious inhibition of self-consciousness, paralysis of apprehension, by which the subject is endowed with a "Dutch courage," which also looks like stimulation but is not; and we begin to see why this undeserved reputation has clung to alcohol. The professional view is at last coming to the point occupied first by N. S. Davis, that there is no legitimate place in therapeutics for alcohol, that its benefits are temporary and illusory, its evils decided and disastrous.

Ammonia is not much employed as a stimulant in America, though in English journals it is mentioned frequently. The stimulation is, I believe, mainly reflex from irritation; it is evanescent, and while not accompanied by the depression directly induced by alcohol, ammonia, if pushed, exerts an injurious influence by hemolysis.

The stimulant *par excellence* to-day is strychnine. Here we come upon a real stimulant; one that enhances every vital function of the body. The pulse gains in tension under its influence.

the respiration is deepened and strengthened, the metabolic changes are accelerated, secretion is increased, peristalsis hastened, the user sees, hears, tastes, smells, feels and thinks with increased power. Indeed, the universality of its action is one of the greatest objections to strychnine; since all men are lazy, even doctors, and it is easy to drop into the habit of stimulating one hundred functions of the body needlessly for the sake of enhancing one that really needs the whip. Besides, under some circumstances strychnine does not act as a stimulant. Crile called attention to the danger of excessive doses in shock. Returning home at midnight one excessively cold winter night—thermometer about 20 deg. below zero, when very much fatigued. I took gr. 1-30 of strychnine. In a few minutes a sense of overpowering muscular weakness assailed me, my legs buckled under me, and it was only by a strenuous effort of the will that I commanded my muscular forces sufficiently to get to my home. Possibly the vascular tension induced by the drug increased the contraction of the vessels caused by cold, until the blood was forced out of the muscular and cutaneous circulation, and there was a serious disturbance of vascular equilibrium.

But strychnine is not an ideal stimulant for all forms of depression. When this is due to toxemia the best remedy is that which stimulates the eliminants to carry the toxins out of the body. While evacuants are essentially debilitating, if they relieve the circulation of depressant toxins, their use is followed by a vital reaction far more enlivening than could be secured by any dose of strychnine. Thus we find with veratrine, the type of the sedative class, a direct and pronounced strengthening action secured by its powerful eliminative stimulation. We may likewise obtain a decided impetus toward a higher plane of bodily health and strength by sedating pain with morphine, or quieting restlessness or muscular jactitation by means of gelseminine, both likewise pure sedatives.

This leads us to what might well have opened our subject, the question of what is a stimulant and why we should seek to stimulate?

Perfect health consists in the perfect and harmonious operation of all the vital functions. If any one of these acts in excess of the rest, it is not health. If any one of them falls behind

in its work, it is not health. Health, then, is the state of equipoise, or equilibrium in the operation of all the vital functions. If any one of these functions fails, the ideal stimulant is that which restores the deficient function without affecting any other. The ideal *materia medica* should comprise a specific stimulant and a specific depressor for every vital function; and the ideal physician shall be he who knows his physiology so completely that he shall be able to recognize every deviation from the normal operations of the body, and have at hand the remedy exactly calculated to restore the aberrant function to equilibrium.

We have not progressed far on this road. Our knowledge of physiologic function has many gaps, some wide and deep; but it suffices for most of our needs. Our *materia medica* contains many useful agents with whose powers we are familiar; and when the habit of precision in prescribing becomes general, we will have calls for specific functional stimulants and sedatives. Many of these will undoubtedly be found among the hundreds of alkaloids and other active principles not yet subjected to exhaustive study. Who knows the exact powers of the thirty active principles of the cinchonas? One we know—quinine—and three others resemble it, but with differences we fail to utilize. Yet I have just found in quinidine all the tonic values of quinine without the disagreeable effect of quinine on the ears, or of cinchonidine on the eyes, that rendered these alkaloids unavailing in my case.

There is a charm about the nice application of single drugs to meet precise indications, that makes one regret he is at the end instead of the beginning of his active medical life.

THE INDETERMINATE SENTENCE AND PAROLE SYSTEM.

BY DR. J. T. GILMOUR, WARDEN CENTRAL PRISON.

Who will render to every man according to his deeds?—Rom. 2: 6.

In sentencing men to prison the three chief considerations in the mind of the judge are the protection of society, punishment for the offence, and reformation of the delinquent. There are two methods of attaining this end, the definite sentence and the indefinite sentence; the latter being commonly known as the Indeterminate Sentence and Parole System. Let us analyze the two methods and ascertain, as far as possible, their usefulness in attaining our object. The definite sentence attempts to measure off so much penalty for so much crime, which means that it deals with the past, which is irrevocable, and not with the future, which contains a possibility, often a splendid possibility. The State should not be an avenger, but a repairer of bad moral conditions. A man should be imprisoned not so much for doing a wrong act, but because he is a wrongdoer. The definite sentence asks the question, How and when can we make him better? What judge can give a time limit to the latter question? When a judge is elevated to the bench is he simultaneously endowed with a superhuman wisdom, giving him a prophetic vision that enables him to read the future and tell how many years hence a criminal will be reformed and fit to mingle with society? If so all judges would impose the same sentence for similar offences. Do they? Most assuredly not. Then, which sentences are right and which are wrong? Who will answer? If the definite sentence deals out even-handed justice to all, why do we see so much jockeying among criminal lawyers to get a certain kind of cases before certain judges, and their great anxiety to avoid other judges? How is it that the criminal codes of no two countries agree on the extent of imprisonment meted out for similar crimes? Every prison register where the definite sentence prevails reveals the greatest inequalities in prison terms for precisely similar offences. How can it be different when the degree of moral indignation against the crime in the mind of the judge is the determining

factor in the length of the sentence? Can all judges have the same degree of indignation, or can any one judge always hold the same opinion? Sentencing a man to prison is always a judicial act, but there the actual relations between the judge and the criminal end, and the judge sees no more of the man whom he has sentenced, and has no further personal knowledge of his conduct or progress. How then can the judge intelligently fix a date for the man to be released? Releasing a man from prison should be an act of administration, but not entirely in the hands of a prison warden. If a man's conduct sends him to prison, should not a man's conduct release him from prison? If a man's conduct makes him a menace to society demanding imprisonment, should not his conduct be tested by conditional liberation before he is granted complete freedom? The definite sentence liberates the criminal at a given time, be he ever so dangerous to society, and be his intentions ever so criminally inclined. It is not uncommon for a man leaving prison after completing a definite term to frankly avow his intention of "getting even with the world." If this class realized that their liberty was contingent on their industry and proper social habits how different would be their attitude toward society and the future.

That the State has an infinitely greater interest in the criminal's future than in his past requires no argument. When we study the heavy handicaps that the great majority of delinquents have been weighted with in early life, in the form of bad parentage, pernicious early environment, and lack of opportunity, we can then clearly realize that the State's self-evident duty is educative and reformative rather than punitive. A Greek proverb says, "To know all is to forgive all." This is sometimes true and sometimes untrue. A considerable percentage of every prison population is the result of neglected childhood, children who, humanly speaking, were damned into the world. Defenceless childhood is surrounded by fragile walls, which all open into vice or crime. The State has to do for this class, unfortunately, in a prison, what the parents and the home failed to do. Treated by the definite sentence, the great majority become habitual criminals, a menace to society, and permanent wards of the State. The Indeterminate Sentence and Parole System is the only reasonable and humane method of developing this most

promising and deserving class into valuable citizenship. The Indeterminate Sentence places the criminal's future to a very large extent in his own keeping. It stimulates and calls forth all that is best in the man and gives him an opportunity to redeem himself and fix the length of his prison term. The definite sentence holds out no such hope or opportunity, and renders the delinquent powerless to better his condition, be he ever so willing to do so. When the element of hope is taken out of the human life the best part of the man is annihilated. The Indeterminate Sentence gives a reasonable control over the morally weak while out of prison, and serves as a steadying and restraining influence while they are regaining an honest foothold in society. The Indeterminate Sentence spells education, hope, reformation and liberty, and places all within the grasp of the delinquent. None of these features mark the definite sentence. The Indeterminate Sentence should never be used as an act of mercy or clemency, but should be based entirely on the criminal's conduct and merits, and extended to him when he has earned it, and simply as his due. The Indeterminate Sentence and Parole System has not been discussed by the American Prison Association for years, for the simple reason that penologists are so thoroughly agreed that it is the basis and essence of every successful prison and reformatory system that to question its merits or doubt its efficiency, would be like criticizing the Lord's Prayer. In Canada we have the Ticket of Leave Act, with some of the most important features so imperfect that we derive but a part of the benefit that accrues from a proper system.

Therefore thou art inexcusable, O man, whosoever thou art that judgest.—Rom. 2: 1.

Society Proceedings

THE INTERNATIONAL AMERICAN CONGRESS OF MEDICINE AND HYGIENE, BUENOS AYRES, ARGENTINE REPUBLIC, MAY 25th, 1910

THE International American Congress of Medicine and Hygiene of 1910, in commemoration of the first centenary of the May revolution of 1810, under the patronage of His Excellency the President of the Argentine Republic, will be held May 25th in Buenos Ayres, Argentine Republic.

In order to facilitate the contribution of papers and exhibits from the United States, there has been appointed by the President of the Congress, Dr. Eliseo Cantôn, and the Minister of the Argentine Republic at Washington, a committee of propaganda, of which Dr. Charles H. Frazier (Philadelphia, Pa.) is Chairman and Dr. Alfred Reginald Allen (Philadelphia, Pa.) is Secretary.

The Congress has been divided into nine sections, each section being represented in the United States by its Chairman in this Committee of Propaganda, as follows:

Section 1—Biological and Fundamental Matters, Dr. W. H. Howell, Chairman, Baltimore, Md.

Section 2—Medicine and Its Clinics, Dr. George Dock, Chairman, New Orleans, La.

Section 3—Surgery and Its Clinics, Dr. John M. T. Finney, Chairman, Baltimore, Md.

Section 4—Public Hygiene, Dr. Alexander C. Abbott, Chairman, Philadelphia, Pa.

Section 5—Pharmacy and Chemistry, Dr. David L. Edsall, Chairman, Philadelphia, Pa.

Section 6—Sanitary Technology, Dr. W. P. Mason, Chairman, Troy, New York.

Section 7—Veterinary Police, Dr. Samuel H. Gilliland, Chairman, Marietta, Pa.

Section 8—Dental Pathology, Dr. George V. I. Brown, Chairman, Milwaukee, Wis.

Section 9—Exhibition of Hygiene, Dr. Alexander C. Abbott, Chairman, Philadelphia, Pa.

It will not be necessary for one contributing a paper or exhibit to the Congress to be present in person. Arrangements will be made to have contributions suitably presented in the absence of the author.

The official languages of the Congress will be Spanish and English.

Members of the following professions are eligible to present papers or exhibits:—Medicine, Pharmacy, Chemistry, Dentistry, Veterinary Medicine, Engineering and Architecture.

Papers may be sent direct to the Chairman of the particular section for which they are intended, or to Dr. Alfred Reginald Allen, Secretary, 111 South 21st Street, Philadelphia, Pa.

ABSTRACT.

Osteopathy.—M. Clayton Thrush, Philadelphia (*Journal A. M. A.*, December 19), gives a critical discussion of osteopathy, its theory, alleged principles, its practice, and its pretended and true relations to general medicine. He shows, from the testimony of osteopaths themselves, its inconsistencies and its comprehensive claims. The objections to recognition of osteopathy and the legal recognition of the practice by the appointment of State boards of examiners and licensing of practitioners of the alleged school of medicine, are given at length, including their lack of educational requirements, their secret methods of drug using while pretending to be opposed to the use of drugs, their opposition to vaccination and other sanitary methods and requirements, etc. The remedy he sees would be in having one board of examiners for all medical practitioners, the examinations being the same for all subjects except therapeutics, the standard to be the same in every State of the Union, so that proper reciprocal relations would be established between the different States. The revocation of the license for intemperance, drug habits, or criminality, and this to be effective through all the States alike. A common standard of preliminary education to be exacted of every person desiring to enter a medical school anywhere in the United States. Every student should be required to pass the examination, no matter what his credentials may be, not excepting a degree in arts or science; said examination to be about equal to the present medical standard of the New York Board of Regents. This would keep out a large number of imperfectly educated persons who do not at present especially honor the medical profession. Lastly, he would have every applicant be of sound mind and body and of good moral character.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Consulting Surgeon, Toronto General Hospital, etc.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon Toronto General Hospital.

Orthopedic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; A. R. Gordon, M.D., Toronto; Helen MacMurchy, M.D., Toronto.

Dermatology:
D. King Smith, M.B., Tor., Toronto.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendant, Gravenhurst Sanatorium, Ont., 722 Spadina Ave., Toronto.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum; Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Physiology:
A. B. Eadie, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Trinity University, Pathologist Hospital for Sick Children, Toronto, Associate Demonstrator of Pathology, Toronto University; Surgeon Canadian Pacific R.R., Toronto; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

THE COLON TUBE

WHETHER the colon tube, after introduction by the attendant, coils up in the ampulla of the patient's rectum, or ascends into the colon is a moot point. Dr. H. W. Soper, *Journal of the American Medical Association,* August 7, 1909, p, 426) gives the literature of the subject, and the results of experiments made by himself, in order to determine the depth to which a long, soft colon tube can be made to penetrate into the colon. He examined sixty persons, using the lateral knee-chest and other positions and trying to introduce long, soft, rubber, blunt-end tubes with side openings into the colon. In some of the cases, a mixture of oil and bismuth, in others a mixture of bismuth and water was allowed to flow through the colon tube at the time it was introduced; in other cases only a well-oiled tube was passed. The positions taken by the tube were verified by means of a fluoroscopic apparatus. These experiments showed that a soft rubber tube could not be made to go any higher than six or seven inches—into the rectal ampulla—without bending or coiling on itself. Only in rare cases of dilatation or hypertrophy of the sigmoid flexure of the colon could a soft rubber tube be made to penetrate into the colon. The X-ray pictures also showed that the mixture of bismuth and oil injected through the colon tube had filled the descending transverse

and ascending colon, though the tube through which it had been injected lay in the rectal ampulla. Evidently, therefore, a short rectal tube, such as is supplied with the ordinary fountain syringe is long enough for the introduction of fluids into the colon.

J. J. C.

LAYMEN RIVAL DOCTORS IN THE CAMPAIGN AGAINST TUBERCULOSIS

The American National Association for the study and prevention of Tuberculosis has issued a statement, which shows that over 45 per cent. of the individuals enlisted in the campaign against the white plague are not members of the medical profession. That Association has 2,500 members, representing every State in the Union and divided as follows: 54.6 per cent. physicians and 45.4 per cent. individuals who are not physicians. In the local and State associations, however, over 50 per cent. of the members are not physicians. These figures show that the anti-tuberculosis campaign is popular in the United States; that persons who are not members of the medical profession are bearing their share of the burden. Somewhat similar conditions have also been observed in Canada. Thus we see by the last annual report of the Canadian Association for the Prevention of Tuberculosis, held at Hamilton, Ont., May 19th, 1909, that the lay membership at that meeting preponderated. Nineteen physicians were present,

and twenty-five persons who were not physicians. Of the latter, three-fifths, 15 persons, were women. In local leagues established in the Provinces of Canada, similar conditions prevail.

There is nothing extraordinary in the devotion of the lay element in the United States and Canada to the prevention of the white plague. It is a very common disease, and a very fatal one, though not abruptly so.

The published statistics of Ontario show that the mortality from tuberculosis in this Province does not diminish. Thus we read in the Report of the Registrar-General for 1907, that in 38 years (1870-1907, inclusive) there were 87,654 deaths from tuberculosis in Ontario. Running through those statistics, year by year, there is a sameness in the proportion which the deaths from tuberculosis bear to deaths from all causes. Thus in 1881, when the total deaths from all causes were 22,821, the deaths from tuberculosis were 2,446, or 10 per cent. In 1891, ten years later, when the total deaths from all causes were 21,558, the deaths from tuberculosis were 2,379, or 11 per cent. Ten years later still, in 1901, when the total deaths from all causes were 29,608, the deaths from tuberculosis were 3,284, or 11 per cent. We wonder if this same proportion will be noted in 1911, the year of the next decennial census.

Owing to the lingering illness caused by tuberculosis, the earning power of a family may be disabled, and their little savings swallowed up. Hence the call for aid and assistance, even when life cannot be

saved. But if the hand of the destroyer is to be stayed, if the work of repressing tuberculosis in town or country is to show results, it must be largely by the voluntary work, and financial aid of individuals determined to do all in their power to circumscribe and lessen the ravages of this plague. Of wealthy patients it is unnecessary to speak; they can remain at home or can venture abroad in search of health, but with the poor, and tuberculosis is largely a disease of the poor, the battle has to be lost or won at home. As Dr Adami put it at Hamilton, "It must be by voluntary effort, also, that the expenses of home treatment of curable cases are met. It is for the municipality to afford the co-operation of its Board of Health and the inspection of the same; for the municipality and the State to assume the segregation and treatment of cases so helpless that they become dangerous sources of infection."

Though numerically stronger the lay element in the anti-tuberculosis associations must look to the professional man for guidance, and it is pleasing to see that the work of establishing anti-tuberculosis leagues and of giving needed instruction to the public in Canada has been well carried out by Dr. G. D. Porter, of Toronto. Similar instruction has also been imparted, in French, to large audiences in different parts of the Province of Quebec by Dr. Valin, Professor of Hygiene of the University of Laval, Montreal. J. J. C.

COPPER IN VEGETABLES

In Taylor's *Medical Jurisprudence* the use of salts of copper (blue vitriol) for the purpose of giving a rich green color to fruits and pickles is mentioned. That author says "If the fruit or pickle is placed in a solution of ammonia and copper is contained in it, the substance is speedily turned blue. The iron test is, however, more delicate. A bright needle immersed in the pickle or plunged into the solid will be speedily covered with copper. The quantity of copper contained in such articles may not be sufficient to cause fatal effects, but serious symptoms of gastric irritation are sometimes produced, and in young persons these may assume an alarming character."

In Bulletin, No. 192 (Copper in Vegetables), issued by the Inland Revenue Department, Ottawa, A. McGill, Chief Analyst, reports the results of the analysis of 69 specimens of French peas imported into Canada. Only about 10 per cent. of these goods contained less than 55 parts per million of copper. A maximum of 55 parts of copper per million is fixed in two European countries, Austria and Germany. Belgium and Russia forbid the use of copper. In Italy and Switzerland, only such vegetables are prohibited as contain more than 100 parts of copper per million. In France, the prohibition of copper in coloring vegetables was rescinded in 1889. England has no legislation on the subject. By a decision of the United States Department of Agriculture, dated

May 1, 1908, it was ordered that, on and after January 1, 1909, no foods greened with copper salts will be allowed entry into the United States. Logically, the effect of this decision should be made to apply to green peas canned in the United States; but of this we have no information.

Dr. G. Stein, (whose paper in Zeitsschrift für Untersuchung der Nahrungs und Genussmittell, November, 1909, is abstracted by A. McGill), throws some light on the question of coppering vegetables. "It is particularly important to the keeping of tinned vegetables that they should be thoroughly sterilized. Sterilization under pressure at 120° C. destroys the chlorophyll and the vegetables become yellow-brown, unless previously treated with copper. Copper was formerly introduced by boiling in copper vessels, which yielded copper to solution in the acids naturally present in the vegetables. It is now introduced as salts of copper, mainly as the sulphate. The coppering of vegetables was first practiced in France, but popular appreciation of the product has caused the innovation to be adopted by other countries. No other method of giving a desirable green to the preserved vegetables has proved a success, and, although it is possible, by using selected material and working with special care, to retain much of the natural green of peas in the preserved article, the process would be too costly to be worked profitably on the large scale."

With regard to the maximum of copper per million parts, fixed by the law in Germany and Austria, it may be said that the work of Graf and others in-

dicates that it is for the most part impossible to give a uniform and satisfactory greening to vegetables, with so small an amount of copper as 55 parts per million. This opinion seems to be verified by the analyses of imported green peas, as sold in the Canadian market, 90 per cent. of which contain larger amounts of copper than 55 parts per million. Whether the revelations of Bulletin 192 shall prove to be a chemical curiosity, or a matter of interest in regard to the public health, we cannot say, but feel inclined to the former opinion. Cases of poisoning arising from the ingestion of imported canned green peas must be rare in this country. The occasional use of this article of food is probably harmless. It might cause vomiting and diarrhea, when eaten in quantities containing one-sixth to one-third of a grain of sulphate of copper, daily, for a period of several weeks. The astringent dose of sulphate of copper is from a quarter of a grain to two grains.

J. J. C.

"CALL IT SIX DAYS"

E. E. K.

With so much sheet lightning flying across the sky of the Medical horizon, caused by an excess of electricity among the members of The Ontario Medical Council lately, we have dared to insulate ourselves, and, still touching wood, have opened the oracle of the Council (the report of its proceedings, 1907 and 1908) and

fearfully perused many of its pages to see what has been causing some of these highly "charged" gentlemen to touch noses and "draw" so many sparks. We think we have discovered a part of it. "The Daylight Bill" has passed! Think of it, what used to be four days is now called six days! Who did it? This great act of putting on the clock? Why, the best fed, best slept man among our Councillors. His little joke is too fine not to sing itself into rhyme—

Who lengthened the day?
I, said Edmund K.,
I lengthened the day.
I'm proud of my work.
I'll never it shirk.
Bravo, say we all;
E'en the Comet may call
And leave cards, ere it fall,
In the gay Doctors' Hall.

It's hard to leave the flights of imagination and joy jingling, and come down to quoting plain prose copied verbatim from the Tome familiarly called "The Announcement of the College of Physicians and Surgeons of Ontario." Quote we must, the finality of the subject is compelling—pp. 233, Report of the Finance Committee, 1907-1908. (*En passant* it may be noted that the session held at Kingston began at 2 p.m. on July 2nd and ended at noon on Saturday, July 6th—*four days* in all.):—

"Dr. Hillier—I would like to ask you about this six days. Does that include the travelling time as well?"

"Dr. Henderson—No, the six days in session."

" Dr. King—The session is called six days. Instead of making a sessional allowance, it is said the session is six days, and the travelling days are extra "

Tempus fugit. Couldn't some one make an amendment at the next meeting of the Council and call the session seven days, and allow for keepin' the Sabbath? W. A. Y.

Editorial Notes

The Book Oath in the United Kingdom.

By legislation passed in the last British Parliament the form of taking the oath in the United Kingdom has been changed. The Oaths Bill, as passed by the House of Commons, provided that the witness was merely required to take the oath with uplifted hand; but, as amended by the House of Lords, the bill provides that the person taking the oath shall hold the New Testament in his uplifted hand. The change advocated by the House of Commons was already permitted, according to Section 5 of the Oaths Act of 1888, to wit: "If any witness desires to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland, he shall be permitted to do so, and the oath shall be administered to him in such form and manner, without further question." The House of Commons wished to do away with the permissive feature of the Scotch oath, which was provided for in the Oaths Act of 1888, and to make the Scotch oath the only legal form of administering an oath to a witness according to the Oaths Bill of 1909. The House of Lords did not coincide with the action of the House of Commons on this matter, but insisted that the place which the Bible has occupied for so long a time in the ceremony of taking the oath should be preserved, and this last view of the case was crystallized in the new Oaths Act of 1909.

Looking at the disputed question from the standpoint of hygiene, and that was the sole cause of dispute, the House of Commons was in the right in eliminating the Bible from the ceremony of administering the oath. Bibles, which are rarely, if ever, disinfected, and which pass through the hands of thousands of persons, may prove to be sources of infection, whether

touched with the lips or hands of witnesses, and are certainly not clean.

The custom of swearing with the uplifted hand (not a hand grasping a Bible) is an old one, and reference is made to it in several passages of the Holy Scripture. Thus, Abram said to the King of Sodom, "I lift up my hand to the Lord God, the Most High, the possessor of heaven and earth" (Genesis xiv., 22). Adjuration with the uplifted hand is also mentioned in other parts of the Bible—(Daniel xii., 7); The Apocalypse x., 5, 6).

On the other hand, the practice of kissing venerated objects is at least as old as Christianity. Kissing the crucifix is in many Christian countries considered a particularly holy act. It is not, surprising, therefore, that the kiss reverential should have been extended to the Gospels and made obligatory in the administration of judicial oaths. The patriarchal form of taking an oath seems to be as solemn a form of adjuration as one can wish for, and it is free from hygienic or æsthetic defects, which exist in the kissing or handling of undisinfected or soiled objects.

Prison Doctors in England and the Home Office.

Carrying to an extreme degree the right of passive resistance to enforced criminal law, some of the suffragettes imprisoned in British prisons refused to take food. Placed in a dilemma, Mr. Gladstone, the British Home Secretary, ordered the prison doctors to feed these prisoners by means of the nasal tube. He did not shoulder the responsibility for the official acts of the doctors, for, when speaking in the House of Commons in reply to a question by Mr. Arthur Lynch, the Home Secretary said that he "put forward medical officers, because it was a medical question, and as the honorable member knows or might have known, any responsibility rests upon the medical officers." This was a most disingenuous answer, for the prison doctors would not dare to

feed sane political prisoners through a nasal tube, unless they had received orders from the Home Secretary to do so.

A hard choice you will say: To resign a good situation, or to do a cruel act at the bidding of a superior. When Napoleon Bonaparte asked Larrey, his chief surgeon, to put the French wounded, lying in camp at Acre, out of pain rather than leave them to be murdered by the Turks, Larrey told him that a surgeon's business was to save life, not to take it. Larrey did not lose his post, but stuck by his chief for fifteen years longer, and joined him in the sauve qui peut at Waterloo. But you may say: Forced feeding is not taking life, but saving it. In the case of an insane person, forced feeding is a legitimate operation; the case is different when the tube is passed down the esophagus of a sane political prisoner, who refuses to take food, that she may regain her liberty. The British Minister who ordered his subordinates to do such an operation is a tyrant. The doctors who did his bidding are shabby fellows. A few more performances of that quality on the medical stage, and the charm of Weelum McLure's unselfish kindness will seem rather exaggerated.

Legitimate Dairy Methods Should Not Raise the Price of Milk.

In a letter, which appears at page — of the present issue, Mr. C. E. Potter, general manager of the City Dairy Co., Toronto, comments on an editorial note entitled "The Cost of Milk Production," which appeared at page 50 of our January issue, and shows that the Toronto milk dealers sell an imperial pint of milk at a lower price than the price charged by New York milk dealers for a wine pint of milk. In writing that note our chief intention was to eulogize proper and necessary procedures in dairies, which serve to lessen the cost of milk-production, while, at the same time, improving the quality of the milk, and we so stated the case. We quoted from a lecture delivered in December last by Professor Dean, O. A. C., to an audience of

farmers, who heard him at the Guelph Fair, on the subject of lessening the cost of milk production. It will not be necessary to repeat here what the lecturer said, but we may repeat the comment we made on his lecture: Given a good type of dairy cattle, there does not seem to be anything in Professor Dean's recommendations calling for that increase in the cost of milk production, of which one hears so much nowadays."

It is possible to exercise human ingenuity to an extreme degree in safeguarding a milk supply. Some cranks might even imitate the programme suggested, in a laughing vein, by the editor of the *New York Medical Journal,* December 4th, 1909, so as to see "that each cow is to have a chambermaid, who will brush her charge's teeth after each meal, spray her with cologne, and put up her tail in blue ribbons."

Such elaborate hygiene would be expensive and would raise the price of milk. Nothing advocated by Professor Dean is of this character; on the contrary he advocated methods intended to ensure pure milk at a lessened cost of production. As a physician and hygienist, we wish to promote the consumption of pure milk in Canada, in preference to other less nourishing and more expensive foods—a large sale and small profit—and we shall always try to help dairymen and middlemen to accomplish that purpose. The prices of milk sold here: 15c per imperial quart of certified milk, and 23 imperial pints of uncertified milk for a dollar, are not excessive.

Neuropathic Wards in a General Hospital.

In the Annual Report of the Canadian Hospital Association, 1909, appears a paper entitled "Neuropathic Wards in a General Hospital," by Dr. Campbell Meyers. This address referred more particularly to the work that is being done in the treatment of functional neuroses in the special wards devoted to that purpose in the General Hospital, Toronto. Dr. Meyers pointed out that work in his department was not for the prevention of

insanity in such cases as showed brain degeneration, or where the heredity was bad—dementia praecox for instance. In such cases he held that it was useless to talk about prevention. On the other hand, there were people, who have a good heredity, who have accomplished a great part of life's work, and done it well, who, as a result of strain, worry, anxiety, excessive household duties, break down and become nervous invalids. If these people are not treated, the depression from which they suffer becomes more marked, as time goes on, with the result that the case develops into acute insanity. It was to this type of case that Dr. Meyers wished to direct the attention of the Association. The term neurasthenia had fallen into bad odor in many cases, because no proper distinction had been made between the two classes of cases referred to.

Many people of the latter class, with defective nervous systems, are not insane, and might not be insane in one year, or in five years; but in ten years, probably, they would be committed to an asylum for the rest of their lives. Up to that time, they had been described as neurasthenic. They are really psychopaths.

Dr. Meyers went on to say that, in nervous as well as mental diseases, the nomenclature was obscure. While we spoke of these cases as types of nervous disease, we were really referring to mental disease, before it reached the state of insanity. A case was presented illustrating the views of the speaker—the patient had been cured.

From Dr. Meyers' description it appears that neurasthenic patients are on the down grade, and are really suffering from mental disease. The friends of neurasthenic patients should place them betimes in neuropathic wards, where efforts may be made to rescue them from the pre-insane rut. In neuropathic cases the necessity of an early diagnosis and appropriate treatment, while there is yet time, is apparent. J. J. C.

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

THE STATUTORY MEMBERSHIP OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO

Toronto, January 11th, 1910.

The Editor THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

SIR,—Referring to your editorial, "The Statutory Membership of the College of Physicians and Surgeons of Ontario," I wish to say that I appreciate greatly your courtesy in submitting it to me before publication. You will remember that in conversation I warned you that it contained several inaccuracies. These I declined at the time to point out, because I was speaking from memory. You will also remember that I advised you to consult the stenographic report of the proceedings in order that your facts might be correct in every detail. This, I am afraid, you neglected to do, for the editorial as it appears is misleading, though I am quite sure unintentionally so. You say that the Legislative Committee advised the change in the wording of Section 6 (1) (a) of the Ontario Medical Act. *It didn't*, if the stenographer's report of the proceedings is correct. It merely said: "Your Committee believe that Section 6 (1) (a) should be interpreted," etc.

You also say that after the recommendation had been discussed in Council it was referred back to the Legislative Committee for their consideration. *It was not!* The *belief* of the Committee was struck out of the Committee's report on motion of the President, seconded by one member of the Legislative Committee. You state that the representative of the University of Toronto is Dr. Britton. *He is not!* The representative of the University of Toronto is Dr. J. M. MacCallum. These are a few of the inaccuracies that have crept into the editorial by not getting your information firsthand from the stenographic report, rather than by taking it from someone with an axe—well, that perhaps needs sharpening.

Further, when this matter was brought up on the morning of

the first session of the special meeting of the Council in December last, one member of the Council moved that copies of the correspondence in connection with it be typewritten and placed in the hands of each member of the Council, in order that each member might vote intelligently on the question. This was refused. Why? Possibly the animus beneath the proceeding might then have appeared upon the surface.

Then from the personal standpoint I wish to say that when I was asked to represent Victoria on the Ontario Medical Council I submitted the Ontario Medical Act to my solicitor. He could see nothing in the Act to prevent my taking a seat, because I, a graduate of Victoria College, and a member of its Senate, represent Victoria College, to which I belong. The Credentials Committee of the Council, consisting of Drs. Johnson, King and Hardy, reported that I had a right to a seat on the Council. The Council accepted the report of the Credentials Committee, and until the Legislature of this Province decides that Victoria University is not entitled to a representative, it does not matter much what the Legislative Committee of the Council *believes*, nor even, my dear Sir, what the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY thinks—strange as this may seem to you.

Yours faithfully.

F. N. G. STARR.

Dr. Starr's claim to membership in the Ontario Medical Council as representative of Victoria University is untenable, because he is a professor in the medical faculty of the University of Toronto, and is thereby debarred from representing Victoria University. (See Ontario Medical Act, Sec. 6, sub-sec. 2.) A well-informed member of the Ontario Medical Council assures us that every statement in the editorial of which Dr. Starr complains is correct, except the use of the name of Dr. Britton for that of Dr. MacCallum. The 1907 edition of the Ontario Medical Register was our authority for that statement.

J. J. C.

REFORMING POLICE COURT INEBRIATES.

The Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—The Society for the Reformation of Inebriates aims at two things:

1st. For some years, in a quiet way, it has been trying to reclaim the unfortunates charged in the Police Court with drunkenness. Daily at the City Hall the Society has in attendance a physician and two other officers, who go among these prisoners, and try to reach those ready to be aided by the Society.

The drink habit is accompanied by a diseased nervous system, and what many of these people need is medical treatment. The physician in attendance gives this to those found willing to accept it, and in some cases the Society bears the expense of keeping in hospital, for a time, inebriates who must receive such treatment if they are to have any chance in life. The results from such methods have been most encouraging.

2nd. The second great aim of the Society is to reform completely the present mode of dealing with inebriates committed to jail. Toronto needs badly, what a good many cities both in Great Britain and the United States now have—a farm outside the city, to which inebriates charged with drunkenness can be sent to be kept at wholesome labor, if possible out of doors, for a time long enough—a good many months in some cases, no doubt—to permit their whole system to get into healthy condition. To send such persons repeatedly for short terms to jail is to give them no real chance. They should be treated as diseased persons, and kept long enough to become healthy in mind and body.

It is obvious that the Society has an extensive work on hand. It has further aims, among others the securing of a Hospital where inebriety may be treated under favorable conditions; existing hospitals make but slight provision for such a class of patients. But the two aims outlined above are the chief ones before the Society for the moment.

To carry on its work, it requires funds, and your readers are urged to aid efforts that, if pressed forward, will bring new

hope and self-respect to many lives. Any sums will be welcomed. If only one dollar can be sent, it will be gladly received. It is hoped that some donors, able to do so, will aid this hard-pressed work generously.

Contributions may be sent to the Treasurer, Hon. S. C. Biggs, Confederation Life Building; the Secretary, Dr. A. M. Rosebrugh, Relief Office, City Hall, or to my address, 467 Jarvis Street.

Yours truly,

GEORGE M. WRONG,
President.

Toronto, January 10, 1910.

PERSONAL.

Dr. D. King Smith was the guest of the Chicago Dermatological Society at the clinic held by the American Dermatological Association in Chicago, Dec. 29th, 1909.

DR. F. N. G. STARR, of Toronto, has been elected one of the Vice-Presidents of the Section of Surgery in connection with the 1910 meeting of The British Medical Association. Sir Victor Horsley is President. We congratulate Dr. Starr upon this honor, but feel that it is a well deserved recognition not only of his ability but of his services to The British Medical Association when it met in Toronto a few years ago.

Obituary

THE DEATH OF DR. JAMES H. RICHARDSON.

"Live, I, so live I,
To my Lord heartily,
To my Prince faithfully,
To my neighbor honestly,
Die I, so die I."

Respected by all, beloved by his students and mourned by his confreres in the medical profession, Dr. James H. Richardson, full of good deeds and after a long life of great activity, and lived sternly, strongly and to good purpose, the splendid old man entered into his rest on January 15th.

Dr. Richardson had the distinction of being the first graduate in medicine at the University of Toronto. He was Professor of Anatomy at Queen's University for a short time, and also held a similar position at Toronto University for some 50 years. Hundreds of his old students, scattered all over the country, and some of them occupying high positions in the profession, always held him in the highest respect.

Born eighty-six years ago, at Presquile Point, Northumberland County, his death was due to old age.

In 1826, when he was but three years of age, his father, Bishop Richardson, moved to Toronto, the old homestead being at the northeast corner of King and Yonge Streets, where he had a splendid orchard. The father, who belonged to the Methodist Episcopal Church, was a patriot, who lost an arm in the attack on Oswego in the war of 1812.

Dr. Richardson, though only a boy at the time of the rebellion of 1837, retained a clear recollection of the exciting times in those days, and the memoranda, which he made then, were of the greatest interest to his later friends.

He began the study of medicine in 1841, with Dr. Rolph, in Rochester, and attended the first course of lectures in King's College here. There was only one other student at that time. After receiving his diploma, he spent several years at Guy's Hospital, London, England, where he witnessed the first use of

ether as an anesthetic in London. In 1847 he returned to practice in Toronto.

In 1850 he was appointed Professor of Anatomy in the newly-constituted Faculty of Medicine at the University of Toronto. Later he held a similar chair at the Toronto School of Medicine. On the restoration of the Faculty of Medicine at the University, he was reappointed, and resigned only in 1902, when he was made emeritus professor.

In 1859 he was appointed surgeon at the jail, and held the position for exactly half a century, resigning only last year.

On April 15th, 1903, a number of his old students tendered him a dinner as a token of their esteem, and his portrait was presented to the University of Toronto.

Dr. Richardson was an enthusiastic military man, and was the first to receive a prize in Canada in the long-distance rifle competition.

He was surgeon of the old "Merchants' Company," before that organization was merged in the Grenadiers in 1862. He held Fenian raid and long-service medals. He was surgeon also of the Garrison Artillery, the Queen's Own, and the 10th Royals.

His chief recreations in the earlier days were shooting and fishing, and his friends have claimed that he had fished every stream from Lake Superior to Cape Breton. In later years he became an enthusiastic curler and bowler.

Dr. Richardson is survived by four sons, Robert and Charles, Winnipeg; George, an engineer working on the construction of the Grand Trunk Pacific, and Dr. W. A. Richardson, who has charge of the medical work of the same railroad at the Yellowhead Pass. Three daughters, Mrs. Ross Sutherland, and the widow of the late Dr. Sutherland, both of Winnipeg, and Mrs. W Freeland, of St. Joseph Street, this city, also survive.

The funeral was on Tuesday afternoon, January 18th, the interment being at the Necropolis.

Dr. Richardson, after his retirement from the jail, told many interesting stories of his connection with that institution.

"The system of confinement was not like it is now," the Doctor once said. "In the old jail the cells were large, and the prisoners were never taken out to work, but any work that was done was inside work, such as pulling oakum for the numerous sailing vessels which were fitted up in Toronto in those days,

or the manufacture of shoes for children and workingmen. Whatever exercise was given the prisoners was in the form of walks, but these were never allowed to extend past a number of painted poles which were put up all over the city, and if, on any occasion, the walks were carried past these points, the prisoner lost all privileges for a long time to come. In spite of all that is said about it, the confinement of prisoners in those early days was in no way unduly severe, and, although my earliest recollection of the old jail in Toronto Street was seeing the old oaken stocks which used to stand out in front of the building, I never in my life heard of them being used.

"A queer case was that of the coachman of the late Hon. John Hilliard Cameron. This man was charged with a double murder of members of his employer's household, and, after a fair trial, was sentenced to be hanged. The morning that he was to die the man hanged himself in his cell, and the people, when it was announced, positively refused to hear that the man was dead, but insisted that influence had been brought to bear, and he had been allowed to escape. However, this theory was soon broken, but not before it had gained so much ground that Governor Allan had to have the body placed in the square where all the people could see it. This was done, and the agitation, which had been growing strong against the authorities, was broken up. That was in the early sixties, if I remember aright."

In Toronto itself there have been many changes in Dr. Richardson's lifetime. "You might think I was joking if I told you as a boy of thirteen I used to help in the orchard around my grandfather's house, just where the Janes building now stands, and that when the town began to grow up he sold this place and bought three acres, where the T. Eaton Company has the factory now, that he might get out of town."

The Toronto of yesterday, and the larger Toronto of to-day, can boast of few more interesting personages than dear old Dr. James H. Richardson, and many will miss the hearty welcome and the ever youthful gleam in the smiling eyes of the master of the quaint old home, with its ghosts of memories, on "Clover Hill."

W. A. Y.

DEATH OF DR. UZZIEL OGDEN.

To have begun one's medical studies in a school with but one lecturer, held in a room over a driving shed, and to have ended them fifty-seven years later as Dean and Professor of a Medical School with 60 teachers and five hundred students, is an experience which most physicians would envy. To have for over fifty years taken an active part in the teaching of medicine is given to but few. Such was the happy experience of Uzziel Ogden, in whose death the medical profession loses one of its oldest and brightest ornaments, one identified most intimately with its history and progress.

Born in 1828, on the lake front of Toronto Township, he commenced the study of medicine in 1845, having been apprenticed to Dr. Crew, of Cooksville, at the School of Medicine conducted by the Hon. John Rolph, M.D., admitted to practice by the Medical Board of Upper Canada in 1849. he first settled in Aylmer, where he rapidly acquired a large practice, and is still remembered. In 1852, owing to Dr. Rolph's occupation in politics and his inability to agree with his colleagues in the Toronto School of Medicine, it was found necessary to reorganize the teaching staff, and at the suggestion of the late Dr. Joseph Workman, who is reported to have said to his colleagues, "If you can get Ogden to come in it will be a success." Uzziel Ogden was recalled to Toronto, and began the Association in both teaching and practice with H. H. Wright and W. T. Aikins, which lasted throughout their lives, and conferred incalculable benefits upon the profession in this country.

During his career, Dr. Ogden taught at different times the subjects of Physiology, Materia Medica and Therapeutics, and Midwifery and Gynecology. Dean of the Medical Faculty of the University of Victoria College from 1880 until its federation with the University of Toronto in 1892, he was largely responsible for their medical examinations and degrees. For the last seventeen years of his teaching life he was Professor of Gynecology in the University of Toronto, and for three Dean of its Medical Faculty. He was one of the forerunners in Canadian medical journalism, and at one time was associated with Rolph and Fulton in the conduct of *The Canada Lancet*. He was the founder and for many years editor-in-chief of *The Canadian Journal of Medical Science*, now *The Practitioner*.

He was appointed physician to Jenny Lind's foundation, the Protestant Orphans' Home, in 1853, to the House of Industry in 1861, to the Hospital for Sick Children on its foundation, and to the Home for Incurables at its inception. In 1875 he became attached to the Toronto General Hospital, having twice previously declined appointment in favor of his friends, H. H. Wright and W. T. Aikens.

How one so handicapped by ill-health and frail physique managed to crowd into a busy professional life so much of editorial and scholastic achievement was always a matter of surprise, but his indomitable spirit and determination never failed.

The staunchest of friends, his gentle disposition and kindliness endeared him to all who knew him. Abhorring all boasting, striving for effect or self-seeking, he lives in the grateful memory of many generations of students, who recall his clear and painstaking teaching, in which were always to be found the newest theories, facts and methods, but passed before the bar of shrewd common sense and of a judgment almost infallible in determining what would stand the test of time and of practice.

DEATH OF DR. G. F. CLELAND.

One of the best-known and most highly respected medical practitioners in Riverdale, Dr. G. F. Cleland, died on January 2nd at his home, 331 Broadview Ave. For some time the late doctor had been in poor health. With hopes of recuperation he went south to Asheville, N.C., but returned, worse in health, to Toronto on the Sunday preceding Christmas, and slowly sank until he died.

Dr. Cleland was the son of the late Rev. Wm. Cleland, and came to Riverdale twenty-five years ago, while quite a young practitioner.

He was a Past Master of Orient Masonic Lodge. In politics he was a Conservative, and he was a member of St. John's Presbyterian Church.

Deceased is survived by his widow, a daughter of the late ex-Alderman Blong, and by two daughters, living at home.

News of the Month

THE CLIFTON SPRINGS SANITARIUM.

THE attention of our readers is called to the page announcement, appearing in this issue, of Clifton Springs Sanitarium. This institution was founded in 1850 by the late Dr. Henry Foster, "in the spirit of Christian philanthropy." It was at a later date handed over by him to a Board of Trustees, " in order that the philanthropic spirit of the plan might be perpetuated." The medical profession should remember that *Clifton Springs Sanitarium is not a commercial Institution.* No profits are paid to anyone, all such being used for the benefit of such classes as Missionaries, Public School Teachers, Physicians and Nurses. Clifton Springs Sanitarium is an ideal place for patients in need of treatment, especial attention being given to cases of *Nervous Troubles* in all forms, *Fatigue* and *Heart Disease,* for which latter condition the Nauheim bath department offers special advantages. The Medical Staff, it will be noticed, is composed of men of the very highest reputation, each one holding titles of no mean order.

The Medical Staff includes:—

Charles P. Emerson, Superintendent, A.B. Amherst, '94, M.D. Johns Hopkins, '99, Former Resident Physician at the Johns Hopkins Hospital, Assistant Professor of Medicine, Cornell University, Ithaca.

Martin B. Tinker, (Ithaca) Surgeon, S.B. Harvard, M.D. Berlin, formerly of the Johns Hopkins Hospital, Assistant Professor of Surgery, Cornell University, Ithaca.

F. W. Spaulding, A.B. Bowdoin, '72, M.D. University of New York City, '75, House Officer City Hospital, '76.

J. A. Sanders, A.B. Amherst, '78, M.D. University of New York City, '81.

C. W. P. Merritt, M.S. Rutgers, '74, M.D. Columbia, '78.

H. M. Imboden, M.B. Lebanon Valley College, '99, Jefferson Medical College, '03, Resident Physician M. E. Hospital of Philadelphia, '03-'05. In charge of the X-ray and Electrical Therapeutic Department.

H. Schoonmaker, M.D. University of New York, '91, Willard State Hospital, '91-'92. In charge of the Nauheim Department.

M. S. Woodbury, A.B. Bowdoin, '03, M.D. Jefferson Medical College, '06. Assistant Surgeon.

Anne A. Heintze, M.D., Woman's Medical College of Pennsylvania, '03, Resident Physician Philadelphia General Hospital, '04-'05.

Isaac Hartshorn, A.B. Amherst, '04. M.D. Harvard, '08.

W. E. Grove, A.B. University of Wisconsin, '04, M.D. Johns Hopkins University, '08, Instructor in Pharmacology University of Wisconsin, '08-'09.

William H. Higgins, A.B. Central University of Kentucky, '04, M.D. Johns Hopkins University, '08, Interne Allegheny General Hospital and Johns Hopkins Hospital, '08-'09.

C. B. Braman, M.D. University of Buffalo, '98, Ph.G. Chicago University, '88.

THE PETERS' SCHOLARSHIP.

By the opening of Toronto University next term, the medical profession of Canada who are alumni of the Toronto Medical School plan to offer the medical faculty a fund of $5,000, to be known as the Peters scholarship. It is to be in memory of the late Dr. G. A. Peters, of Toronto, who is regarded by the medical world as one of the surgeons of his time.

Dr. A. Primrose, of the faculty of medicine at the University, is treasurer of the fund. To date $3,500 have been paid in subscriptions. The prize will be an annual one, and will be for research work in surgery.

"THE BORDERLAND BETWEEN MEDICINE AND SURGERY."

We must apologize to our readers at not being able to carry out our promise, made in the last issue of The Journal, and publish this month Professor Maurice Richardson's address, entitled "The Borderland Between Medicine and Surgery," which he delivered at The Academy of Medicine, Toronto, a few weeks ago. There was a little unexpected delay in the receipt of the Doctor's manuscript, but it will appear March first without fail.

ITEMS OF INTEREST.

Medical Scholarships.—W. J. Gage has offered five $100 scholarships and gold and silver medals, with $50 cash accompanying each, for competition among the fourth and fifth year students in medicine at the University of Toronto. The subject of the competition is the early diagnosis and treatment of tuberculosis, and the conditions include at least a week's attendance at the clinics of the Muskoka Free Hospital for Consumptives.

Messrs. C. J. Hewlett & Sons, Ltd., of London, England, have recently favored us with a copy of "Therapeutical Notes," a booklet "devoted to New Remedies and Special Pharmaceutical Preparations," and wish it understood that a copy may be had by any member of the profession for the asking. Physicians should address the firm at 35 to 42 Charlotte Street, E. C., London.

The Canadian Medical Exchange wishes us to say that this season of the year is probably the best of any for physicians desiring to sell their practices, to offer them, as the Exchange has a great many more bona-fide buyers registered with them, who are looking for a location, than they have practices to offer; and Dr. Hamill, who has conducted this important department of medical affairs for many years, would be glad to have the opportunity of opening up negotiations with physicians desiring to sell. The list of his offers will be found in the advertising columns of this Journal, the complexion of which changes each month. The address is 75 Yonge Street, Toronto.

BOOK REVIEWS

Northern Lights. By Sir Gilbert Parker. Toronto: Copp, Clark Company, Limited.

A few years ago Canadians were under a spell, charmed by Gilbert Parker's tales with their description of character and life in French Canada. Then he left his home and with it much of his fascination as a story teller, for his longer novels of late years have only interested one and have been "closed over" often without a regret. But in *Northern Lights* (short stories) he is coming back to his own again. The great West has breathed upon him and he has thrown its color on his canvas with cold, telling strokes, and life in its everyday bigness has again claimed Canadian Gilbert Parker. W. A. Y.

Diseases of the Pharynx and Larynx. By Dr. E. J. Moure, Surgeon in charge of the Nose, Ear and Throat in the Department of the Faculty of Medicine, Bordeaux. Translated and adapted by J. Malcolm Farquharson, M.B., F.R.C.P., Edinburgh, Lecturer on Diseases of the Nose, Ear and Throat in the School of Medicine of the Royal College, Edinburgh; Surgeon, Ear and Throat Department, Royal Infirmary; and Senior Surgeon to the Ear, Nose and Throat Department of the Eye and Ear Infirmary, Edinburgh. With 210 illustrations. New York: Rebman Company, 1123 Broadway. Price, $4.00

Dr. E. J. Moure is very much better known on the continent than in this country, in fact he is one of the leading men in Laryngology and Rhynology in Europe. If he is not so well known on this side of the water, it is doubtless due to the comparative infrequency with which the medical profession are able to read French literature.

The present volume is really a second edition of the series of

lectures which he has given. It has been a pleasure to read this one, as it is an epitome of the author's own personal experience during the past twenty-five years. He remarks that though his views appear at times contrary in classical works, he has the conscious feeling that they are the result of his own clinical observations. Nowadays when there are so many books written in which scissors and paste play such a large part, it is a pleasure to find one in which the author's own ideas alone are incorporated.

Dr. Farquharson has been able in his translation, to make the book easy and pleasant to read. There is too much in French medical literature out of the English reach, and we hope to see more French works presented in the English language.

P. G.

Hydrotherapy. A Brief Summary of the Practical Value of Water in Disease for Students and Practicians of Medicine. By WILLIAM H. DIEFFENBACH, M.D., United States Delegate and Vice-President of the First International Congress on Radiology and Ionization at Liege, Belgium. Former Professor of Bacteriology, New York Medical College and Hospital for Women; Professor of Hydrotherapy, New York Homeopathic Medical College and Flower Hospital; Physical Therapeutist to Volunteer St. Gregory's Hospital; Electro-Therapeutist to Flower and Hahnemann Hospitals; Member of the National Society of Physical Therapeutics, American Electro-Therapeutic Society, New York Physico-Therapeutic Society, American Roentgen Ray Society, American Institute of Homeopathy, Academy of Pathological Science, etc., etc. Pp. xvi, 267. Illustrations, 39. Cloth, $3.00. New York: Rebman Company, 1123 Broadway.

An increasing amount of attention is being devoted to the consideration of physical measures employed in the treatment of disease, and it is well for the general practitioner to know somewhat about the various physical therapeutic methods, even if he is not able personally to supervise their employment in suitable cases, but must in most instances depend upon the modern hospital or sanitarium for such services.

Hydrotherapy is claiming its share of attention, and deserves a hearing, for it has much to offer and its claim is a just one, old almost as man himself.

The author, having delivered lectures on Hydrotherapy for the past seven years, has his subject well in hand, and presents it clearly, concisely and in very attractive, readable form. Appropriate dietary is frequently outlined, and accessory physical measures alluded to when necessary.

The matter is excellently arranged, much attention is paid to technique and the text further elucidated with a liberal supply of illustrations, the majority of which are full page, and altogether it is a book which will amply repay the most careful perusal.

C. R. D.

Quain's Elements of Anatomy. Editors, Edward Albert Schafer, LL.D., Sc.D., F.R.S., Professor of Physiology and Histology in the University of Edinburgh; Johnson Symington, M.D., F.R.S., Professor of Anatomy in the Queen's University of Belfast; Thomas Hastie Bryce, M.A., M.D., Professor of Anatomy in the University of Glasgow. In four volumes. Vol. III., "Neurology." By E. A. Schafer and J. Symington. Part II, containing the descriptive anatomy of the peripheral nerves and of the organs of the special sense. With one plate and numerous illustrations, many of which are colored. Eleventh edition. Longmans, Green & Co., 39 Paternoster Row, London, New York, Bombay and Calcutta. 1909. All rights reserved.

The third volume of Quain's Anatomy (eleventh edition) is devoted to the description of the Structure of the Nervous System, including the organs of special sense. The volume has been divided into two parts, the first having appeared just about a year ago, and the second quite recently. A considerable part of the work has been rewritten with a large number of illustrations added. Quain's Anatomy is perhaps one of the most complete works on this subject in print.

W. A. Y.

Practical Microscopy. By F. Shillington Scales, M.A., B.C. (Cantab.) London: Bailliere, Tindall & Cox. 5s. net.

This is a second edition of Elementary Microscopy, published in 1905. The new material is a chapter on Photo-Micrography, and a section on Microscopical Technique which replaces the elementary chapter on Mounting which appeared in the former edition. Both are complete and practical without attempting to

explain more than the general principles involved. Details are left to the writers of special works on technique, a full list of whom appears as an addendum. Much of the confusing terminology of the catalogues is explained, and the reader is left with a feeling that he understands his microscope, its care and possibilities very much better than he did before studying the book. The work is evidently done for an English constituency, as it is quite local in its tone, although a good word is said for a couple of American microscopes that are favorites in this country. The whole impression given by the chapter on the choice of instruments is that "made in Germany" is not the guarantee of quality it might be and that optical goods of the very best quality are British in manufacture or in model. This is a new idea for our local laboratory workers. M. H. V. C.

Formulaire des Medications Nouvelles pour 1909.. Par le Dr. H. Gillet, Ancien Interne des Hopitaux de Paris, Chef de Service à la Policlinique de Paris. Preface par H. Huchard, Membre de l'Academie de Médecine. Quatrième édition, entièrement refondue. Paris: Librairie, J. B. Bailliere et Fils, 19 rue Hautefeuille, près du Boulevard Saint Germain. 1909. Tous droits réservés.

This little book is a veritable multum in parvo. To facilitate research the matters treated in it are arranged alphabetically, and in this order appear new treatments, the diseases in which they are employed and the drugs or preparations indicated in the text or in formulas. This formulary might be aptly defined an "up-to-date clinical index."

In the text the name of each disease is followed by the names of new treatments adopted for it, with references to the page where an article is devoted to each of these treatments.

After the name of each drug, the new methods in which they are utilised are given, together with the page, where the drug is mentioned. Each new treatment is described identically as follows: (1) Principle of the method, (2) nature of the drugs or therapeutic agents employed, (3) mode of administration, (4) doses. (5) mode of action, (6) effects. Among the new treatments described may be mentioned the following: Radiotherapy, photo-therapy, enterokinasis, anti-plague serum, Mar-

moreck's serum, zomo-therapy, etc. To any physician who reads French it would be a valuable vade mecum. J. J. C.

The Relation of Medicine to Philosophy. By Dr. R. O. Moon. London: Longmans, Green & Co., 39 Paternoster Row. New York, Bombay and Calcutta. 1909. All rights reserved.

This interesting little book covers in all nearly 250 pages, and is full of the most useful information on the subject of early medicine. It is divided into twelve chapters, and deals with such subjects as the "Relation of Early Greek Philosophy to Early Greek Medicine," "The Influence of Early Christianity on Medicine," "Arab Medicine and Arab Philosophy," "Medicine of the Renaissance," "The Effect of Philosophy on Medicine in the Seventeenth Century."

To anyone desiring to acquaint himself with the history of medicine dating from the early centuries we confidently recommend Dr. Moon's book. As stated in the preface, the object of the author in publishing his volume was to show "by taking various important epochs in the history of the world how intimately medicine has been bound up with the greatest thought and philosophy of the age." W. A. Y.

Manual of the Diseases of the Eye. For Students and General Practitioners. By Charles H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Sixth edition, revised, with 362 original illustrations. New York: William Wood & Co. 1909.

There have been six editions of this manual since 1900—a sufficient proof of its popularity. It has been translated into French, German, Italian, Spanish, Dutch and Japanese. Such a record is sufficient proof of merit. In this edition paragraphs have been added on transillumination, conjunctival tuberculosis test, cerebral decompression, etc. In the external examination of the eye directions are given for exposing the retrotarsal fold—if done as directed the results will not be very satisfactory. To get good results the patient must look down. On pp. 5 and 6 the eyeball of young children is inspected by "rolling in the eyelid somewhat," but the illustration shows the eyelids rolled not in, but

out. The thumbs are directed to be used. The first fingers are more satisfactory. In direct examination—at a distance and in the indirect method—with the ophthalmoscope we are told that the examined sits directly in front of the examiner. This may be "de rigueur" in New York; another position might possibly be more pleasing to well bred patients.

"When the chalazion is of large size and more accessible externally it may be advisable to operate through the skin," p. 39. This is the very thing ought not to be done. A most lively imagination is needed to see any protrusion of the eyeball in the illustration of exophthalmus, p. 70. In an operation done so frequently by the general practitioner as enucleation of the eyeball it might have been well to give explicit directions as to which side of the eye the enucleation scissors are entered, but perhaps the figure is deemed sufficient information. Subconjunctival hemorrhage "is of no importance," p. 79. Perhaps not, but an examination of the arterial tension of a few such cases might cause Dr. May to be of another opinion. These are a few points open to difference of opinion. A word of praise must be given to the colored plates. No other manual is known to us with the same abundance of plates of the same excellence. The illustrations of the external diseases of the eye are surprisingly life-like and free from the usual garish coloring. Many an elaborate atlas is inferior in this respect. J. M.

Outlines of Bacteriology (Technical and Agricultural.) By David Ellis, Ph.D., D.Sc., F.R.S.E., Lecturer in Bacteriology and Botany to the Glasgow and West of Scotland Technical College. London and New York: Longmans, Green & Company.

This interesting volume of 260 pages is well described by its title. The whole field of Bacteriology is outlined, and laboratory work of a special kind is quite unnoticed. The chapter on Sterilization is practical from the surgeon's standpoint, and a table of antiseptic and germicidal values is given with authority from a long series of established experiments. This chapter also contains matter interesting from the point of view of the medical health officers as does the section on the treatment of Sewage The part played by bacteria in various industrial pro-

cesses is succinctly described, and the comparative values of various methods of preserving foodstuffs is at least instructive. The book is not designed as a necessity to the practitioner or student of medicine. The fuller consideration given to the nitrifying bacteria in contrast with the twelve pages given to organisms pathogenic to animals is sufficient indication of its character. M. H. V. C.

Clinical Studies for Nurses. For Second and Third Year Pupil Nurses. By CHARLOTTE A. AIKENS, formerly Superintendent of Columbia Hospital, Pittsburg, and of Iowa Methodist Hospital, Des Moines. 12mo. of 510 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1909. Cloth. $2.00 net. Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

This volume "is designed to assist in securing graded instruction for nurses; to simplify and systematize the problem of teaching; to promote uniformity; to save time for teachers and pupils, and also to serve in some measure as a handbook for the nurse who is already trained and at work away from a school or hospital." Thus does the authoress describe *Clinical Studies for Nurses,* and, after looking through her book, we can say in all candor that her description is a true one and her volume one to be recommended to nurses, both graduates and probationers.

The Practical Medicine Series. Under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-graduate Medical School. Volume V. Obstetrics. Edited by JOSEPH B. DE LEE, A.M., M.D., Professor of Obstetrics, Northwestern University Medical School, with the collaboration of HERBERT M. STOWE, M.D. Series 1909. Chicago: The Year Book Publishers, 40 Dearborn Street.

There are ten volumes in this series, and while they are published primarily for the general practitioner, at the same time the arrangement in several volumes enables those interested in special subjects to buy only the parts they desire.

The volume on Obstetrics is very entertaining, and the chapters so nicely indexed form a very ready reference for a physician whose time is limited. The chapters on The Pathology of Preg-

nancy, The Obstetric Hemorrhages, The Toxemia of Pregnancy, Anesthesia in Labor and the management of Labor and Puerperal Sepsis are of especial interest, giving a most lucid treatise with the present-day opinion of the most successful methods of treatment. The book commends itself to the physician, as it is one of the best on the subject of obstetrics and should receive a large subscription sale.

C. F. M.

A System of Ophthalmic Therapeutics. Edited and chiefly written by Casey A. Wood, M.D., C.M., late Professor of Ophthalmology and Head of the Department, Northwestern University Medical School; ex-President of the American Academy of Medicine. Chicago: Cleveland Press. 1909.

This work, which deals solely with the non-operative treatment and prophylaxis of diseases of the eye, will fill a gap long present in English ophthalmological literature. It is indeed a complete work on the subject. If any criticism is to be offered it is that the editor has been too generous in the allowance of space to his contributors, for many of the histories of illustrative cases might advantageously have been cut out. In addition to accounts of the drugs used in ophthalmic practice there are chapters on electricity, electro-therapy, serum and bacterial therapy, examination of the eyes of school children and of corporation and railroad employees, anesthesia in eye operations, systemic and nervous diseases affecting the eye, ocular hygiene. An unusually full index gives immediate access to any desired information.

J. M.

A Text-Book of Physiological Chemistry, for Students of Medicine. By John H. Long, M.S., Sc.D., Professor of Chemistry in Northwestern University Medical School, Chicago. Second edition, revised, with forty-two illustrations. Philadelphia: P. Blakiston's Son & Co. 1909. $2.50 net.

The author presents in this book the fundamental facts and theories of physiological chemistry in the simplest possible manner and in a form suitable to the needs of medical students. The work is divided into four general parts. The first part is devoted to the "Nutrients and Related Substances"; the second covers the "Ferments and Digestive Processes" the third "Chemistry

of the Tissues and Secretions of the Body," and the fourth and last "The End Products of Metabolism, Excretions," etc.

A considerable number of important changes have been made in the preparation of this new edition. In the third section there is a very interesting discussion on the self-preservation of the blood, in which the various theories of immunization are explained in detail. A much fuller discussion has been given to the subject of the urine, and a new chapter has been added on the methods of urine analysis. These methods embrace not only the clinical tests, but the most important quantitative processes as well. This is a very attractive and useful book for medical students.

A. E.

High Frequency Currents; Their Production, Physical Properties, Physiological Effects and Therapeutical Uses. By H. Evelyn Crook, M.D., B.S. Lond., F.R.C.S. Eng. Of the Middle Temple, Barrister-at-Law; Member of the Rontgen Society, etc.; Formerly Assistant in the Electro-Therapeutical Department, West London Hospital, etc. Second Edition. Demy 8vo. Pp. xiii, 232. Illustrations, 49. Price, 7s. 6d. net. London: Bailliere, Tindall and Cox, 8 Henrietta Street, Covent Garden. 1909. (All rights reserved.)

The book has been thoroughly revised, largely rewritten, brought more up-to-date, and new material added. Other authorities are frequently alluded to and freely quoted. The author has no unreasonable claims to make, but presents his subject in a very conservative manner, not in the slightest degree highly colored. His work should be productive of much good and deserves a place on the shelves of those who are interested in the therapeutics of High Frequency Currents.

C. R. D.

Legal Medicine and Toxicology. By R. L. Emerson, A.B., M.D. (Harvard), Member of the Massachusetts Medico-Legal Society; formerly Instructor in Physiological Chemistry, Harvard University Medical School, and Assistant in Clinical Pathology, Boston City Hospital. New York and London: D. Appleton & Co. 1909.

This volume is divided into three parts. The first 206 pages are devoted to legal medicine, the next 185 to toxicology, with the examination of the blood and stains, and the next 190 to

extracts from various United States laws affecting the practice of medicine. This latter one-third of the book doesn't concern many of those interested in this subject in Canada.

The portion devoted to toxicology is nicely illustrated, and covers the subject pretty thoroughly.

The part devoted to legal medicine contains many suggestions that are of undoubted value; and many accounts, such as the determination of the interval between death and the recovery of a body, have been carefully worked out.

There is, however, very little that is new in this subject, but what there is of that character is very well and conveniently arranged for the use of the general practitioner. A. J. J.

The Morphia Habit and its Voluntary Renunciation (a personal relation of a suppression after twenty-five years addiction), with notes and additional cases by Oscar Jennings, M.D. (Paris), Fellow of the Royal Society of Medicine. London: Bailliere, Tindall & Cox, 8 Henrietta Street. Paris: Brentano, 37 Avenue de l'Opera. 1909.

Dr. Jennings' book on this subject, which nowadays is attracting so much attention, not only among the medical profession but the laity as well, is one of nearly five hundred pages. It is divided into twenty-eight chapters and deals with the subject in a thorough manner.

It is nothing short of alarming to read the author's preface wherein he states that one medical man out of every four is a drug *habitue,* and that the proportion of medical addicts to the total of cases is, in some statistics, as high as 90 per cent. The author goes still further and states that one-fifth of the mortality in the profession is said to be caused by morphinism. This is undoubtedly, if true, a most alarming state of affairs, and we are in hopes that the author is entirely wrong in his statements. There is, however, no doubt that there is far too great a prevalence of morphinism amongst members of our profession, and we would heartily recommend our readers to purchase Dr. Jennings' book, and read it for themselves. One of the most interesting chapters in the book is entitled, "The Sanitarium Treatment of Morphinism," and another one which attracted our attention was that of "Hypnotism and Suggestive Influence." The entire

book is worthy of the most careful perusal and we wish for it a good sale, if for no other reason than to call attention to this important subject. W. A. Y.

The Practical Medicine Series, comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VI.—General Medicine. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago; and J. H. Salisbury, M.D., Professor of Medicine, Illinois Post-Graduate Medical School. Series 1909. Chicago: The Year Book Publishers, 40 Dearborn Street.

This sixth volume contains some very good articles on the acute infections, diseases of the mouth and throat, diseases of the stomach and intestines, diseases of the liver, pancreas and peritoneum.

The articles are taken from the latest writings on these subjects and bring our knowledge of the various questions up-to-date. The chapters on diagnosis, particularly with regard to diseases of the stomach, contain a number of diagrams and a large quantity of new matter.

Like some of the others of this series, the perusal of this book should place the reader in the best possible position with regard to his knowledge of the subjects therein contained. A. J. J.

Medical Libraries. II. 1909. Reprinted from the Medical Record, September 25, 1909. New York, U.S.A.

The New York Academy of Medicine publishes, in pamphlet form, a list of the medical libraries of the world, which are conducted in the interest of the medical profession and also those owned by medical societies. The list is arranged alphabetically, the name of the library being followed by the post office address, the name of the librarian, and the number of bound volumes. Corrections and communications concerning libraries and applications for copies of the list (with stamp enclosed) may be addressed to the Librarian of the New York Academy of Medicine. An unpretentious, but very commendable enterprise. J. J. C.

Clinical Examination of the Urine and Urinary Diagnosis. By J. Bergen Ogden, M.D., Medical Chemist to the Metropolitan Life Insurance Company, New York. Third Edition, revised, Octavo of 427 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, $3.00 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

Unlike many works upon this and similar topics, Dr. Ogden's book is not a mere compilation of tests surrounding some favorite theory or research of the author, but is equally and lucidly written throughout. The arrangement of the text is excellent. The first portion of the book deals with the various urinary tests and the writer has shown discrimination in giving prominence to those which, while accurate, yet can be simply and inexpensively carried out. In the second part we find an exposition of the ailments in which urinary changes occur, with a very complete enumeration of those changes; and also a chapter on the examination of urine for Life Insurance. Altogether this, the third edition of Dr. Ogden's book, is thorough, painstaking and accurate and can be heartily recommended. F. W. R.

Surgical Diagnosis, By Daniel Eisendrath, A. B., M. D., Professor of Surgery in the Medical Department of the University of Illinois, (College of Physicians and Surgeons); Attending Surgeon to the Michael Reese and Cook County Hospitals, Chicago. Second Edition, thoroughly revised and enlarged, with 574 original illustrations, 25 of them in colors. Philadelphia and London: W. B. Saunders Company, 1909.

The last word has not been written nor said upon Surgical Diagnosis, and yet reams have been written. To our mind most authors miss the mark sadly by a neglect of method, and the present is no exception to the rule. At the same time the author, with a belief in the advantage of training the eye, has his book profusely illustrated, and thus helps to make up for some of the other defects. Photographs of some of the methods do something toward making up for lack of description.

On the whole, however, we feel confident that practitioners will find much that is useful in the work, and with a working

knowledge of methods of examination, will find in many of the chapters much that will assist in arriving at a correct diagnosis.

F. N. G. S.

Dietetics for Nurses. By JULIUS FRIEDENWALD, M.D., Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Second revised edition. 12 mo. volume of 393 pages. Philadelphia and London: W. B. Saunders Company, 1909. Canadian Agents: The J. F. Hartz Company, Limited. Cloth, $1.50 net.

Ostensibly written for nurses this book will be found useful by practitioners, as dietics forms a considerable part of the modern treatment of the disease. Cultivated ladies, especially mothers of families should read it.

To nurses it should be quite a treasure. Infant feeding and the feeding of the sick are discussed and an outline is given of the principles involved in the nourishment of patients affected with the various diseases, in the management of which diet plays an important part. Rectal alimentation and the nourishment of operative cases are described. Full diet lists with instructions are given enabling a nurse to carry out the instructions of the physician. It is written in clear, simple language.

J. J. C.

Congenital Dislocation of the Hip Joint. By J. JACKSON CLARKE. Published by Bailliere, Tyndall & Cox, 8 Henrietta Street, Covent Garden, London.

This little book of less than one hundred pages gives a succinct, yet lucid, account of this deformity, concerning which so much has been accomplished by orthopedic surgeons in the last fifteen years.

When Lorenz, Paci, Hoffa and other continental surgeons toward the close of the last century, brought the subject prominently before the surgical world, it was thought that all cases could be cured. Naturally, this overstated view caused a violent reaction, and some American surgeons of repute declared that not more than 20 per cent. could be cured.

After opportunity for observation, so as to be able to form a matured judgment, and after a considerable personal experience, Dr. Clarke says: "The true and permanent repositions amount to about 75 per cent., and thus greatly outnumber the cases of stable anteversion."

Chapter two gives a concise but satisfactory account of the pathological anatomy. Then follows a clinical description which should enable the general practitioner to recognize these cases.

His treatment is, first, such manipulation and dressing as recommended by Lorenz, followed after the removal of the dressings by physical training to effect improved function.

In cases where manipulative measures and post-operative treatment have not succeeded in retaining the femur in its correct relationship, the author employs a very simple operation devised by himself, which promises well and should be looked upon with favor because of its simplicity.

This brochure should prove an instructive and trustworthy guide to the general practitioner. Its clearness, brevity and good illustrations make it a thoroughly practicable guide to the man who is doing general practice. B. E. M'K.

Insomnia and Nerve Strain. By HENRY S. UPSON, M.D. Published by G. P. Putnam's Sons, New York and London, The Knickerbocker Press.

This small work is disappointing from its title, since one naturally expects that it would discuss fully the relations between insomnia and nerve strain. Had the title been Dental Disease and Nerve Strain the object for which it was written would have been much clearer to the reader.

The author has endeavored to demonstrate that the removal or correction of disorders of the teeth will often cure both mental and nervous diseases of the most varied types from dementia praecox to neurasthenia. The same result has been claimed by other authors in regard to the eye, ovary, floating kidney, etc., etc. The rationale of such treatment is difficult to understand. Perhaps if a dentist were in constant attendance on every family mental and nervous disease would soon be eradicated! By all means let morbid conditions of the viscera be relieved as

rapidly as possible in mental and nervous diseases, just as should be done if these diseases were not present. The psychical effect on the patient of the operation, and not the physical result of the operation itself, is the cause of such improvement as may take place, and this view is quite in accord with our knowledge that the primary disturbance in these diseases is in the brain. A better grasp of the subject of psycho-therapeutics will undoubtedly do more to relieve mental and nervous disease than either the dentist or the surgeon can ever hope to do by the physical results of operation.

The only illustrations in the book are those of dental skiagraphy, the technique of which is clearly given in the appendix.

C. M.

A Manual of Venereal Diseases. By Officers of Royal Army Medical Corps.. London: Henry Frowde, Oxford University Press. 1907. This book can be obtained from the Canada Law Book Co., 32-4 Toronto St., Toronto, at 40 per cent. discount.

This book is based on the reports of the members of the committee appointed to enquire into Venereal Diseases in the British Army.

Its contents are essentially practical and it will be found a most useful manual for the general practitioner. Venereal diseases are discussed from four points, viz., Prevention, Pathology, Diagnosis and Treatment. Useful therapeutical appendices are added. The section on Pathology is especially interesting and well written. In discussing the specific action of mercury it is surprising to find no mention of its action on the Spirochetae Pallida.

Diseases of the Male Generative Organs. By Edred M. Corner, M.B., B.Sc., M.C., F.R.C.S. London: Henry Frowde, Oxford University Press. 1907. This book can be obtained from the Canada Law Book Co., 32-4 Toronto St., Toronto, at 40 per cent. discount.

Diseases of the prostate and venereal diseases are not included in this useful manual. Hydrocele, varicocele, misplacements of testicle and allied conditions are fully dealt with from the

standpoint of etiology, symptomatology and diagnosis. While the indications for treatment are clearly discussed, operations are not described in detail.

In contrast to the author's disapproval of operative treatment as a routine for varicocele is his advocacy of operation for all cases of phimosis and for slight pathological changes in the testicle. G. S. S.

Auscultation and Percussion, together with other Methods of Physical Examination of the Chest. By SAMUEL GEE, F.R.C.P. Pp. 325. Fifth edition. The Oxford Medical Publications. London: Henry Frowde. $1.50. For sale by Canada Law Book Co., Toronto St., Toronto, at 40 per cent. discount.

Every physician should be acquainted with this little gem on Physical Diagnosis. It is compact, concise, and withal most readable. There is no attempt to introduce additions to the nomenclature, but rather, a strong desire shown to retain original terms in their original meanings. Though of special value to the teacher and student, it should be in every physician's library. J. H. E.

The Open-Air or Sanatorium Treatment of Pulmonary Tuberculosis. By F. RUFENACHT WALTERS, M.D., B.S., Lond., M.R.C.P., F.R.C.S.; Physician to the Crooksbury Sanatorium; formerly Physician to the Mount Vernon Hospital for Consumption and Diseases of the Chest. Pp. 323. Crown 800. London: Bailliére, Tindall & Cox. 1909. Price not stated.

"An attempt has been made in this little book to give a complete description of the methods of treatment employed in a good open-air sanatorium, for the use of physicians in charge of consumptives, whether in such a place or elsewhere. In an attempt to make it available for use of patients as well as physicians, it is written in two parts, numbers in the first part referring to paragraphs in the second part when the more technical matters are discussed.

The book is written for English readers, and should be a fair guide for such. The chapters on "treatment abroad" deals

only with European resorts and Egypt, and the whole of the numerous chapters on home treatment, verandahs, tents and shutters, ventilation, heating and lighting are written from the English viewpoint. These should be entirely rewritten to be useful for patients in Canada.

Other chapters leave much to be desired. In that devoted to body temperature, though there is a good general discussion on oral and rectal temperature, the normal mouth temperature is not stated, and the patient is left quite in the dark as to normal limits. The instructions for disinfection of a room with sulphur and formaldehyde are very carelessly given and are not reliable. In the discussion of milk as a cause of disease, pasteurization is used as synonymous with sterilization—a gross mistake.

The sections on tuberculin, therapeutically, must be entirely rewritten to be in any measure correct. For example, he says of Deny's tuberculin: "It is stated that smaller doses will cause reaction than is the case with Koch's T.A. The usual initial dose is *1 milligramme* in afebrile cases." Yet his diagnostic dose of old tuberculin is 1-5 miligramme, increased to 1-2 milligramme. The instructions for use of B. E. are also vague.

The book has many good points, but must be carefully revised before it is a safe guide. Until this is done, it is not a book we can recommend for Canadian readers.

J. H. E.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VIII. Materia Medica and Therapeutics, Preventive Medicine, Climatology. Edited by GEORGE F. BUTLER, Ph.G., M.D.; HENRY B. FAVELL, A.B., M.D.; NORMAN BRIDGE, A.M., M.D. Series 1909. Chicago: The Year Book Publishers, 40 Dearborn Street. Price of the series of ten volumes, $10. Price of this volume separately, $1.50.

The present volume, No. VIII., well sustains the reputation of this popular series. The articles are judiciously selected and conveniently arranged for reference. The book is of the usual size (348 pages). In the Materia Medica section, the drugs and other therapeutic agents are arranged in alphabetic order.

A considerable section is devoted to the different vaccines, serotherapy and X-ray treatment. Preventive Medicine and Climatology are well represented.

This series will be found very useful for reference, covering as it does the whole field of medical literature for the year.

J. J. W.

Aids to Microscopic Diagnosis. (Bacterial and Parasitic Diseases). Student's Aid Series. By E. BLAKE KNOX. London: Bailliere, Tindall & Cox. 1909.

This handbook will probably serve the purpose for which it has been written: "to supply those preparing for examinations with a work for revision purposes of a convenient size," etc., as the author states in the preface. It is concise, and contains a great deal of useful information succinctly compiled in one hundred and fifty pages. The ground covered is indicated in the title. The statement on page 87 that "Post-typhoid thrombosis may be prevented by giving either citric acid or fresh lemonade, which precipitates the excess of lime salts in the blood and makes it more fluid," is hardly likely to find general acceptance. On the whole, however, it is an admirably prepared compend and will doubtless be found very useful for many who prefer a concise and convenient aid.

J. G. F.

The December number of the *Annals of Surgery* (Philadelphia), which completes the fiftieth volume of that journal, is worthy of more than passing notice. It is a jubilee number, and, by its size and the character of its contents, fitly marks so important an event in its history. The cosmopolitan character of the journal is seen from the list of contributors, which comprises the leaders in surgery of England, Scotland, Denmark, France, Italy, Hawaii, Canada, and the United States.

Twenty-two articles form a number of more than four hundred pages. The illustrations, some of which are colored, are profuse, making a volume which merits the term of a jubilee number. Such an event in the history of any medical journal is worthy of note.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXVII. TORONTO, MARCH, 1910 No. 3

Original Contributions

THE BORDERLAND OF MEDICINE AND SURGERY*

BY MAURICE H. RICHARDSON, M.D.,
Moseley Professor of Surgery, Harvard University.

In selecting a subject of interest to physicians as well as to surgeons, to specialists as well as to general practitioners, none seemed more suitable than that of the relations between the different bodies of clinical workers. In dealing with this subject we have to consider the borderland which separates the fields of medicine, surgery, and the specialties. My address, therefore, concerns chiefly those whose work is practical rather than theoretical, at the bedside rather than in the laboratory. Not that I would leave out of consideration the laboratory, for there better than anywhere else can be tested the results of clinical work; but what I have to say deals chiefly with the selection of methods of treatment in groups of diseases; with the results of these different methods; and with such deductions as I have been able to draw from many years' experience, at the bedside and in the operating-room.

The progress of medicine and surgery since I entered the Harvard Medical School has been, of course, prodigious. I have been permitted to see for myself that wonderful advance of medicine and surgery which has made our profession brilliant

* An Address delivered before the Academy of Medicine, Toronto, January 4th, 1910.

among human occupations. I have seen with my own eyes what the late Henry I. Bowditch used to say he wished he might live to see with his: the marvellous strides which were made in the last part of the nineteenth century in the fight against disease. The field of medicine has been freely invaded by surgery, until it has seemed that perhaps nothing would be left for medicine. The line of attack has advanced and retreated, retreated and advanced, but the ground gained by surgery has always been greater than that lost, until the borderline between medicine and surgery has been carried far into what was once the domain of medicine.

It is well for us at times to pause and consider, not only the things that we have accomplished, but the things that we have failed in; to take account of stock and to open a fresh ledger; to balance old accounts and to start new ones; to claim as surgeons the achievements of surgery, but to admit as candid and fair-minded men our failures and disappointments, and, in thus admitting our failures, to strive with our medical confrères to indicate the lines along which progress is to be made.

Our duty to our students and to our readers is to present an impartial account of our work, and particularly of our failures, lest they find, when they first encounter the responsibilities of practice results very different from what they have been led to expect. We must teach young men exactly what difficulties they themselves will meet with, lest, in seeing failures where they were led to look for successes, in meeting disaster where they anticipated victory, they become unduly discouraged.

In ourselves as teachers we must remember, on the other hand, that failures are more depressing than successes and more lasting in the memory. We must, therefore, strive lest we become too pessimistic as our experience increases. Indeed, if we should go on living and practising indefinitely, I sometimes think that by the time we were as old as Methuselah, we should, under the accumulated disasters of centuries of experience, come to a standstill, and be afraid to undertake even the simplest case.

But if we cannot transmit to others our experience in full, so that they can take up the burden just as we leave it and with the ripe experience of our years, we can endeavor to transmit at least those principles which our experience has established. Then, with such precepts and warnings as we may be able to impress

upon them, young men—eager, enthusiastic, and hopeful—will be all the better able to learn in the dear school of their own experience.

I am led, therefore, on every favorable occasion to speak on subjects of clinical interest, and to reflect in my addresses the style of teaching which I believe to be of value in the shaping of the student's views of his profession. Our object is, first, to make faithful, truthful, sound, and skilful healers of the sick.

Dr. Oliver Wendell Holmes, in his delightful essay on "Scholastic and Bedside Teaching," gives expression to eternal truths in medical education. They guided instruction at Harvard in 1865. They still guide it in 1909. "The most essential part of a student's instruction," he said, "is obtained, as I believe, not in the lecture-room, but at the bedside." ("Scholastic and Bedside Teaching.")

"I am in little danger of understating anatomy and physiology, but as each of these branches splits up into specialties any one of which may take up a scientific lifetime, I would have them taught with a certain judgment and reserve, so that they shall not crowd the more immediately practical branches." . . . "The bedside is always the true centre of medical teaching." . . . "We are continually appealing to special facts" (of experience). "We are willing to give Liebig's artificial milk when we cannot do better, but we watch the child anxiously whose wet-nurse is a chemist's pipkin. A pair of substantial mammary glands has the advantage over the two hemispheres of the most learned professor's brain, in the art of compounding a nutritious fluid for infants." . . . "The humble beginner who is alarmed at the vast fields of knowledge opened to him may be encouraged by the assurance that with a very slender provision of science in distinction from practical skill, he may be a useful and acceptable member of the profession to which the health of the community is entrusted."

On November 6, 1861, Oliver Wendell Holmes delivered an introductory lecture to the incoming class at the Harvard Medical School on "Border Lines in Medical Sciences." "Science," he said, "is the topography of ignorance. From a few elevated points we triangulate vast spaces, inclosing infinite unknown details." . . . "The best part of our knowledge is that which teaches us where knowledge leaves off and ignorance begins."

From this point of view Dr. Holmes considered the border line of progress between the known and the unknown. Dr. Fitz a few years ago delivered an admirable address on the "Border Line Between Medicine and Surgery" considered from the point of view of the historian and physician. In this address he considered not so much the interval separating truth from ignorance as the border line case between the surgeon and the physician.

My effort is a consideration of the patient as viewed by the surgeon rather than by the physician; a consideration of the patient for his own best interests from the standpoint of proved truth as admitted by the physician from his side of the borderline and by the surgeon from his. Our greatest endeavor should be to approach the borderline between ignorance and knowledge with a full realization of the limitations of our knowledge. In the past, surely, the borderline between medicine and surgery has been that between demonstrated truth and demonstrated ignorance; and the best part of our knowledge has been that which, as Holmes says, has taught us "where knowledge ends and where ignorance begins." We consider the patient's best interests in the light of established facts, and are, therefore, at the borderline of progress, restrained by our ignorance of what exists beyond that line. And is it not true that the borderline between medicine and surgery is the borderline of ignorance? I do not mean the ignorance of medicine or the ignorance of surgery as to what in the borderline pertains to each, but rather the ignorance of those vast fields which lie beyond the possibility even of an imagination. In those fields we must necessarily explore with extreme care, making sure of one step before taking another, and with each advance, considering the difficulties and dangers of the next.

My teaching at the bedside has been, the past few years, a delightful experience, in that I have been able to hold, with Fitz, what are called borderland clinics—he presenting the medical side and I the surgical. With the retirement of Fitz last year, Richard Cabot and I have taken up the fight which has been interesting and inspiriting to the students and to ourselves. Moreover, it has been of incalculable value to the patient. These clinics have been largely made up of abdominal cases, because the abdomen is the region wherein lies chiefly the borderland. Any inaccessible region, however, is a borderland one

because it is the inaccessibility of the disease that makes diagnosis difficult, and when diagnosis is difficult or impossible the necessity for operation is masked in the uncertainties of recognition.

There would be no borderland case, I am convinced, were the exact condition as demonstrable at the bedside as it is in the autopsy room. From this point of view there is no borderline case. Each lesion would be clearly mechanical, relievable or not. But, if mechanically relievable, there might well be a difference of opinion between surgeons and physicians as to the matter of surgical treatment.

From another point of view there is a distinct difference of opinion as to the comparative benefits of medicine and surgery. The stomach provides a borderland, and gastric ulcer a borderline in this class of cases.

A third point of view is that from which is considered the treatment, by palliative operations, of such diseases as cancer of the œsophagus, intestine, rectum, brain, and spinal cord.

And there is still a fourth point of view, that of certain diseases in which environment and hygiene play an important part. Such, for example, are tuberculosis of the kidney, of the peritoneum, and the like, in which operations present grave immediate risks, with at best somewhat doubtful prognosis, whereas medicine is safe though not radical.

With increasing experience I have realized more and more the importance of prognosis. Prognosis in most human occupations is the vitally important element guiding action. Upon prognosis depends decision. When prognosis is sure, decision is sure; when prognosis is uncertain, decision is uncertain. Hence in the majority of cases prognosis means decision.

But in the borderland case prognosis does not always mean decision, even if the prognosis is sure, for even when we know the outcome of disease, the best treatment, whether medical or surgical, palliative or radical, is debatable. This is one of the important considerations under my title.

For example, take cancer of the rectum or of the sigmoid flexure, in which the prognosis in even the most favorable cases is bad—the question of relieving obstruction by an artificial anus, or not, is debatable. Some patients would prefer to die at once rather than endure for a few months a living death; others would cling to every hour of life, no matter how agonizing.

Some physicians look upon the attempted prolongation of life under such conditions as unwise; others regard life as so precious as to justify prolongation of its spark to the last second.

In a wise decision of such a question, it seems to me that there is much to be said on both sides, but the most telling evidence comes from the patient. The question may, however, be decided by the physician or the surgeon. The chief element of decision is the prognosis.

To illustrate my meaning of the value of prognosis, take this specific case—cancer of the sigmoid flexure or rectum, with intestinal obstruction. Experience and knowledge make prediction reliable. In a very small percentage of cases, radical cure is shown by knowledge to be possible. Actual experience in radical operations upon these cases has shown the surgeon the hopes and limitations of his proposed operation. He can make by his examination under anaesthesia a pretty sure prediction of the outcome of a radical operation. He can do this often even without an anaesthetic. He can say, for example, "A radical operation in this case is of no real use"; or he may say, "There is a good chance of radical and permanent cure—one chance in ten, for instance." Unfortunately, in a deplorable percentage of cases, he must say. "There is no chance of permanent cure; the only possible relief is by an artificial anus. The dangers in this palliative operation are not great. You can learn to take such care of the anus that it will not trouble you excessively, nor will it be very offensive. You will have two or three years—perhaps more—of tolerable life, and then there will be very little pain or other suffering."

Such a prognosis the surgeon, relying on experience, will be able to give. Furthermore, he will be able to say, with truth, that death from chronic intestinal obstruction is one of the most dreadful forms of death: the pain is excessive and alone demands relief; faecal vomiting is far beyond any other form of human agony. Of the advisability of the artificial anus, which relieves pain, prevents faecal vomiting, prolongs life, and permits productive work, there would seem to be no question, and, between the wisdom of surgical and of palliative treatment, no possible doubt.

But there is doubt and difference of opinion. I have heard commended strongly the wisdom of that patient who, under the

horrors of rectal cancer, submits to the deadening influence of narcotics until death comes to his relief. This seems to me indeed a living death.

The point of view of the patient varies, I think, with his intelligence. Occupation, environment, riches are of importance, we should say, as making life endurable, not to say enjoyable, for we can hardly imagine a life worth living, to a refined patient, with a neglected and filthy abdominal anus, offensive to himself and to everybody else, and preventing employment and social intercourse. But the restored capacity for productive work gives, through intelligence, evidence strongly favoring the palliative operation.

I do not refer to inoffensive palliative measures so much as to the offensive—to gastrostomies for stricture of the oesophagus so much as to enterostomies for stricture of the intestine. The former, if troublesome, are not foul-smelling and offensive.

The late Prof. ———, of Amherst College, shortly before his death, told me, after two years of an artificial anus, that these two years had been filled with enjoyable life; that he had been able to do good work; and that he had been a comfort to his family.

Another instructive example was that of Mr. ———, who kept a market in Providence. This patient was able for several years to attend personally to his business; and, it will be remarked that in a market, of all places, the artificial anus is the most undesirable thing possible.

My friend ——— for several years has spent most of his time at the ——— Club. No one ever knew, or knows, that he is carrying the burden of a colostomy.

Evidence has been brought by those who oppose these operations prolonging life at the expense of cleanliness and perhaps of comfort, that they are not worth while, and that the patient had better be left to die; that euthanasia under morphia is the physician's duty. Many chapters could be written under this theme. That hopeless disease is, from its hopelessness, medical and not surgical, I will not admit; but that it is best treated now by palliation and now by operation, there is in my mind no doubt. I would have said that there was no doubt in any mind, from the facts of experience; but I have found at many consultations physicians who advise against prolonging life, with an artificial

anus in rectal cancer, or with a gastrostomy in oesophageal cancer.

The scope of my essay does not include an exhaustive consideration of this theme, but its practical importance is great.

Prognosis depends upon many things. It rests upon a broader foundation than diagnosis, in that it includes diagnosis. The diagnosis is based upon many things, but it does not include many other things which affect prognosis.

Nor is prognosis the only element of decision for or against certain kinds of treatment, medical or surgical. Prognosis is affected by environment, for example, though diagnosis is not. Treatment is affected by diagnosis and prognosis, and certain attributes of the patient, friends, family; its effect upon the community, upon other patients, upon the art of surgery.

There are many cases which come up to illustrate my meaning. Cancer of the rectum, for instance, so extensive as to preclude an attempt at radical cure; does not justify prolongation of life at the expense of an artificial anus in a crowded tenement among the poor, when it might among the well-to-do. Such a view as that just expressed is, however, far from defensible. Why is it assumed that life to a poor man in a crowded tenement is not as sweet as to the rich man in his palace?

Attempted extirpation of extensive disease of the stomach, with a grave prognosis, in which there are but few chances of immediate recovery and still less of permanent recovery, hurts surgery in the community: it has an evil effect upon other patients and it hurts the art of surgery. Under such circumstances it is necessary for us to protect from procedures so unreasonable as these, the patient, the friends, the community, and the art of surgery, even if the patient himself is clamoring for operation, because he does not know as well as we do what, on the whole, is best for him. He does not realize that his last state will be vastly worse than his first.

But it is hard for a hopeful and enthusiastic surgeon, especially in the beginning of his career, tamely to yield to an aggressive foe; we cannot learn always by the experience of others, and it is a pity that we cannot. Franklin says, "Experience keeps a dear school, but fools can learn in no other, and scarcely in that." Yet it is just that experience and hope which makes most for progress. Had I in my younger days heeded the warnings of

R. M. Hodges, I should have given up all hope in operating for cancer, for he had himself been led to the gloomiest prognostications.

The line of demarcation in 1875 between medicine, surgery, and the specialties was very sharply defined; between medicine and surgery it was especially clear. At that time surgery included the modern specialties of orthopedics, gynecology, and genito-urinary diseases. Orthopedics meant club-foot chiefly; gynecology, ruptured perineum; and genito-urinary diseases meant clap, syphilis, stricture, and stone in the bladder.

Bigelow did all these things, more or less, as well as operations on the eye. His chief pleasure was in genito-urinary surgery, and his influence first stimulated in Boston our best specialists in genito-urinary diseases. We had no idea what G. U. would mean, or what gynecology would claim. We little thought that the time would come when kidneys would be extirpated, or extra-uterine pregnancy diagnosticated and remedied. What the surgeons of that time would have said of the specialty of gynecology, we cannot even guess. Indeed, at the present time it would be hard to say, when we are called, as I have been, by a gynecologist, to help decide between a paratyphoid fever and an appendicitis in a male!

In 1875, however, the visiting surgeons at the Massachusetts General Hospital had to do everything. The operation for club foot was a common one. To this day, gynecology is done by the staff, medical and surgical.

In many ways this simplicity of assignment of everything to the physician, to the surgeon, or to the then established specialties of eye, ear, throat, skin, and nervous diseases was commendable. I am not so sure that we should commend even now the splitting up of general surgery into specialties that are not practised by specialists—into highly specialized groupings presided over by general surgeons.

Bigelow was a surgeon with a predilection for genito-urinary work; Cabot, a general surgeon who enjoyed the gynecology of that day. Porter was more at home in hare-lip, cleft palate, and in fine plastic workmanship.

To-day this arrangement of cases which demand special skill is admirable, provided that in a hospital staff certain unusual diseases are all referred to one or two men who take special in-

terest in them. But it is to my mind a question whether a great specialty can be best practised by one who does not devote his whole time to it.

The genito-urinary specialty includes diseases of the kidney, like stone and neoplasms, just as gynecology takes in the diseases of the female pelvis. But no surgeon is fitted to open the abdomen unless he knows the surgery of the kidney and of the pelvis, as well as of every other possible abdominal lesion. Furthermore, a specialist is not a specialist if he is also a general man, whether in medicine or surgery.

The borderland in 1875 was, broadly speaking, the human anatomy separating the accessible from the inaccessible anatomical regions. Surgical diagnosis was, therefore, the recognition of external pathology—of diseases and conditions that could be tested by the senses.

The great advance in surgery which safety of operation has made rapid, is not due altogether to safety either. It has been partly the result of improved diagnosis, so that the surgeon could foresee what problem was before him.

The real reason why abdominal surgery was so slow in starting was the danger of it. Those of us who think that modern surgery is really modern must remember that "There is no new thing under the sun" (Eccl. 1:9). Had it been possible safely to perform even what are now regarded as the simplest abdominal operations, there was not wanting the skill to perform them. Indeed, I do not believe that we see to-day the skill, rapidity and anatomical knowledge which made the brilliant operators of pre-anaesthetic days. I have read the details as to operations of that time, told by Warren in 1828 in the *Boston Medical and Surgical Journal*, and I do not believe that the leisurely methods of to-day, under anaesthesia, can possibly educate the modern surgeon to such a high degree of swiftness and skill. Surgeons of that day, however, did perform some of the difficult operations of to-day. In 1828-30, in the *Boston Medical and Surgical Journal*, were published descriptions of vaginal hysterectomy by a method which I fondly thought original with myself. But, after all, it was the dreadful mortality of those early operations which kept back the borderline skirmishers for so many years. Not that external surgery was so very safe, when it was thought that inflammation was essential to repair. I well remember the explana-

tion of my chief that the lipomata always suppurated, though the operation was usually very speedy. This suppuration, he said, was due to the loose connective tissue capsule of the lipoma.

I am often asked by young men whether I advise them to take a medical or a surgical service in a hospital—by young men who are in doubt whether they will undertake medicine, surgery, or general practice. I dare say that many physicians are asked the same question. My reply is that, on the whole, a man will get a broader training in a surgical service than he will in a medical one, because he will get surgery—itself now a very broad field—and he will get a certain amount of medicine also, especially cases of pneumonia and other post-operative complications. Moreover, he will see in the surgical wards patients with many diseases essentially medical, especially abdominal. He will get also a surgical training in abdominal diagnosis, which I think is more effective than the medical training in diagnosis, because he will see in the operative cases at least the connection between cause and effect and the demonstration of the mechanical causes of symptoms. He will have the inestimable advantage of control over his diagnosis.

At a recent borderland clinic, between Richard Cabot and myself, there were brought from the medical wards six cases of supposed tubercular peritonitis. The diagnosis was disputed by the surgeon in three. All were operated upon, and three only were tuberculosis—the honors were even. But the good to the patient, to the assistants, and to the chiefs, was great, because each patient had the benefit of a wide experience, both medical and surgical; each assistant saw the reasons for or against the symptoms put to the final test, and saw, therefore, most vividly the error or the truth; and, finally, the chiefs beheld, in unquestionable demonstration, the accuracy or falsity of their observations, the reliability of their conclusions, and the real value of their experience.

Now the assistants, both medical and surgical, see such demonstration in a combined clinic, but they do not, as a rule, see transferred cases. Medical men make their diagnosis, and that is the end of it. To be sure, surgeons, in transferring their patients to the medical side, lose track of them, and they never know the facts unless the patient dies.

A knowledge of surgery can be gained only in a hospital: a

working knowledge of medicine can be picked up in practice. Furthermore, a surgical service gives a man, it seems to me, a better preparation for general practice, because it is so filled with sudden and unexpected emergencies that the student learns quickly self-possession and self-reliance. Not that there are lacking abundant opportunities for the medical interne to learn surgery, but the young men are so overwhelmed with their own work that they have little time to follow the work of their colleagues. I have often thought that the best service is the all-round service in a small hospital, where one sees medicine, surgery, obstetrics, and the specialties. The objection to this is, of course, that in none can he get highly specialized teaching.

One of the great satisfactions of my professional work has been the realization that I have lived through these wonderful advancements that our profession has made since I was a student. Thirty years ago there was no borderland between medicine and surgery; or, if there was, it was almost too narrow to be recognizable. The least invasion of medicine was enough at times to raise a storm of protest. Henry I. Bowditch met with tremendous opposition in first performing thoracentesis for pleurisy. To be sure, this procedure, though seemingly a very simple operation, had, and has to this day, dangers of the gravest sort, when performed by one ignorant of the far-reaching effect of emptying, under atmospheric pressure, a rigid cavity, the viscera of which have been violently displaced by one-sided pleural effusions. But apparently the operation was of the simplest sort. It was not a violent overstepping of the borderline, like McDowell's ovariotomy; but it was nevertheless a surgical operation encroaching upon the domain of medicine. And yet I do not believe that the opposition to the aspirating needle was jealousy. It was that conservatism which is characteristic of our profession, and which is one of our best attributes when not carried to bigotry and intolerance. Even to-day we meet just such opposition in the invasion of new fields, and to justify such invasion we must show to our opponents that progress is real and justified by its benefits to the patient. It is the expression of a determined minority—the crystallization of opposition which, when overcome by the truth, makes that truth conspicuous and beneficial.

In 1875, the borderland was, as I say, a clearly defined one,

from the nature of external pathology. Its extension to where it is to-day became a problem of safety. Safety in the first expansion was owing entirely to Lister; safety to-day is owing to technical skill and to a knowledge of pathology. Progress at first was owing to anesthesia; later, to asepsis through bacteriology; to-day further expansion goes hand in hand with physiology. An intimate knowledge of anatomy, with mechanical skill, was, up to 1846, the surgeon's great reliance. To-day, through good asepsis, even the most bungling operations are usually successful; and a bungler, that in the old days would not have been tolerated a moment, now invades with confidence the most forbidding areas. Moreover, while he is doing it, he is watched by the physician with a complacency which is—to those who know skill from the want of it—extraordinary.

Fortunately, as I say, a familiarity with bacteriology makes possible, through asepsis and the *vis medicatrix naturae,* the healing of almost any wound. And the difference in results between the good and the bad operator, in the average case, is not very great. And yet I suppose that in such an operation as that for chronic appendicitis there is a difference of from three to five per cent. in mortality, or from no mortality to five per cent.

In operations of great magnitude and difficult dissections in dangerous anatomical surroundings—like the removal of the uterus from between the bladder, rectum, and ureters, or the common duct stone from between the portal vein and the inferior cava, the duodenum, and the pancreas—swiftness and precision in dissecting make all the difference in the world.

For some reason, and probably a sound one, though I am unable to see it, an intimate knowledge of anatomy is not now regarded as essential for the surgeon. We have indeed drifted far from the old days, when the student had on the tongue's end and in his mind's eye, the great and important facts of surgical anatomy.

It seems to me that the anatomy of the neck is simplicity itself, compared with that of the parts about the Foramen of Winslow or the uterine cervix, and that familiarity with the ureters is vastly more important than familiarity with the recurrent laryngeal nerve. And yet the man who does not hesitate to remove a uterus will shrink from a thyroidectomy, a

deep dissection of the subclavian triangle, or an excision of the sternum and first rib.

If it has been a great satisfaction to me to live through the wonderful progress of medicine, it has been a chagrin to see the gradual disappearance of the skilled anatomist and the brilliant dissector. But I have little doubt that the pendulum will again swing toward the old ideas, abandoning some at least of the new, and to the advantage, I am sure, of surgery as a technical art.

There is one theme upon which the surgeon is continually harping, and upon which I now must say a word of warning. And I say it, not in the aggressive, know-it-all way, without giving the other man the credit either of wisdom or experience, but with the full consciousness of my own imperfections in diagnosis and in prognosis. This theme is the *importance of early and precise prognosis.* I am not unaware, of course, that prognosis is always difficult. What saith the preacher? "A wise man's heart discerneth both time and judgment. Because to every purpose there is time and judgment, therefore the misery of man is great upon him. For he knoweth not that which shall be: for who can tell him when it shall be." (Eccl. viii., 5-7.)

The suffering of patients is great upon them unless time and judgment (diagnosis and prognosis) are wisely discerned.

What I have seen in the development of abdominal, and, for that matter, cerebral surgery, has been the opposition, first, of the majority and then of the minority to early surgery in the borderland case. And I have been myself one of the hesitating majority. I well remember the rules which I laid down, definitely and forcibly, and based upon a small experience, as to the selection of cases in appendicitis—this one for operation; that one for palliation. And have I learned wisdom as to time and judgment? A little, I hope, but not all there is to learn. As I write these words, I fear evil tidings from a patient with acute appendicitis, in whose case operation was delayed by the physician from Friday to Monday night, and by myself over Monday night to Tuesday noon. To be sure, the patient had had many attacks from which she had recovered. None as severe as this, however. She was 58 years of age, and stout—a bad subject for operation, as well as a bad one for the disease unoperated

upon. And I hoped for the opportunity to remove the appendix in a period of quiescence. It was the same old story—trivial constitutional disturbance, low white count (11,000), but marked local tenderness, with distention. The operation showed an inflamed and thickened appendix, with odorless pus. I dare say that this patient will do well, and that the delay of a night in so mild a case has made no difference. Nevertheless, prognosis was at fault.*

Now, in this very recent case, an accurate *prognosis* was the one indispensable deduction to be desired. The physician's diagnosis was accurate; but his favorable prognosis was a matter rather of hope than of expectation. The wish was father to the thought, as indeed was my own in waiting over night. The *real* reason for delay lies in the hope that things are not so bad as they seem.

The same natural hope is seen to-day in the objections which many have to the removal of gallstones that are but slightly offending. The chief support of these objections lies in the reports of the autopsy-table, where have been found so many gallstones which have never given a sign. But the surgeon is impressed by the evils of gallstones in advanced cases, and the higher mortality in such cases is owing to delay. I am impressed, besides, in family histories, by the frequency of deaths from gallstones, when I enquire specifically for the cause of death in each member of the immediate family.

As a matter of fact, we know the prognosis of every pathological lesion, and we know it well enough to say what the chances are. We know that it is either certain or uncertain. The prognosis of cancer of the stomach is certainly bad; that of gallstones certainly doubtful. Prognosis is good, bad, or doubtful, according to many and varied circumstances, as we all know. Do we know diagnosis well enough? Are the uncertainties of diagnosis and those of prognosis enough for a wise decision as to "time and judgment"? Is not this a topic that it is well to dilate upon in connection with the disease claimed as theirs by both physician and surgeon?

We pay little attention to prognosis, and yet prognosis is what decides everything, even the assignment of the case; for prognosis means, does it not, the course a disease will follow

*This patient made a good recovery

under medical, under surgical, and under no treatment. The prognosis of pneumonia, for example, depends upon its own attributes, influenced a little by medical attention and a good deal by the patient's powers of resistance, and none at all, conceivably, by mechanical (surgical) treatment.

Peritonitis — always till recently purely medical — got, through its own lethal tendencies, the most evil of prognoses, influenced but little if at all by medicine. As soon as its mechanical nature began to be recognized, and as soon as the effect of mechanical treatment upon these causes was apparent, it became clear that prognosis was directly dependent upon "time and judgment"; upon diagnosis and immediate intervention. The prognosis of peritonitis in the perforation of gastric ulcer under medical treatment, was as bad as it could be; under late surgery, it was bad; under early, good; under the earliest possible, brilliant. Hence prognosis has given to surgery the emergencies of gastric ulcer. So it is in appendicitis, extrauterine pregnancy, tumor torsions, and many other emergencies.

In some, on the other hand, prognosis, as determined by experience, has not so definitely placed the borderline between medicine and surgery. Take the acute conditions of the pancreas described by Fitz (Acute Pancreatitis: *Boston Medical and Surgical Journal,* Vol. CXX., No. 8). I have never seen a recovery after operation for acute hemorrhagic pancreatitis, and I am inclined to think that few surgeons have. I have seen what I regarded as the scars of healed fat necrosis, scattered throughout the peritoneum, and I once opened with success an abscess which possibly was caused by an acute pancreatic infection.

Prognosis in this very serious condition leads me to hesitate before operating, in the hope, though not perhaps the conviction as yet, that if there is any chance, it comes through the powers of Nature, aided by the physician's art. But unfortunately for accuracy of assignment, the emergencies of surgery are so varied within the abdomen that he is a skilful diagnostician who can say that *this* is pancreatitis, *that* appendicitis; *this* gastric perforation, and *that* an internal strangulation. Hence accurate diagnosis promotes accurate prognosis; and, in the mere recognition of an emergency of some kind, the hopeless prognosis of acute pancreatitis is buried up by the hopeful one of acute emergencies in general. The surgeon is unwilling, upon so difficult

a deduction as acute pancreatitis, to run the risk of withholding the aid which all confusing diagnoses so urgently demand, and, in all of which prognosis under surgical art, promptly applied, is so favorable.

But most diagnoses are sufficiently accurate, we should say, to enable us to decide what is medical and what is surgical. And yet are they?

An illustrative case at once suggests itself—a case in which my diagnosis was *acute haemorrhagic pancreatitis,* and Fitz's *acute intestinal obstruction.* I operated upon the patient (Vol. LXVII., p. 161), a man of fifty-six, with little hope, and that little based upon the possibility—nay, probability—of my being wrong. Fitz was very positive of his diagnosis, and I could not shake it in the least. I cut down upon a peritoneal cavity that was full of blood, and hastened to congratulate myself on the accuracy of my deduction, forgetful of that pride "which goeth before destruction." The blood came from passive congestion of six feet of small intestine, strangulated in a hole in the omentum. Fitz's diagnosis was as brilliant a piece of deductive reasoning as I ever saw.

The real borderland case is not, however, so much the one in which the operation is hopeless as the one in which surgery offers no better chance than medicine—if, indeed, it offers as good.

The one great example of this kind of a case is the neurasthenic with questionable lesion, especially of the uterus, ovary, appendix, or kidney. I should place the patient with a movable kidney in the category of the borderland. And yet, from another point of view, the movable kidney is a mechanical defect relievable only by mechanical art. The borderline here is in the case itself. Some movable kidneys are distinctly surgical, and even if the patient is a neurasthenic, that neurasthenia is one of the results of the imperfection. The same thing may be said of the chronic appendicitis, the painful ovary, and the misplaced uterus. And it takes a very little experience in surgery, medicine, and neurology to tell the case which demands surgery or medicine or neurological treatment.

I am convinced that by far too many neurasthenics are operated upon, for a recovery under surgery is the exception rather

than the rule. Indeed, the patients are more often made worse than better.

The evil effects of surgery on the nervous and imaginative patient, whether neurasthenic or not, are so frequently seen that every surgeon knows the importance of a careful selection in such cases. There is a difference between an apprehensive imagination and neurasthenia. A man may be apprehensive of disease—most people are—he may be imaginative even, but no person with a normal nervous system is a neurasthenic. Surgery, by removing the cause of fear, or even of imaginary or trivial discomfort, often returns in relief and comforts a hundredfold the risks and discomforts of operation. Operation upon the neurasthenic returns nothing to the patient. Her last state is worse than her first, and is often pitiable. And the worst of it is that surgery and the surgeon are blamed when a really good effort has been made. I see many patients, especially women, who are nervous wrecks, and who, with their friends, attribute all the ills to the surgeon, who has perhaps removed the ovaries or an appendix. This is a burden which neither the surgeon nor surgery should bear.

The neurasthenic, nevertheless, occasionally has acquired her neurasthenia by reason of some surgical lesion, the removal of which will in time permit a perfect recovery. I have seen not a few such cases. The deduction from these observations is that extreme care must be taken in the assignment of the cases, this one to the surgeon and that to the physician. The best rule is to forbid surgery until every medical and palliative measure has proved useless.

In the suspected disease of the imaginative and apprehensive, especial care is essential lest some really grave lesion be over looked.

I do not think, however, that the surgeon or the physician is likely to err in careless diagnosis, for these are just the cases hardest to treat—those in which the most careful histories and the most painstaking examinations fail to find any physical explanation for symptoms. Operation becomes then, as it should, a last resort rather than a first, and its failure is not censurable; nor is it censured, I think, when undertaken in this the proper spirit.

There is a class of diseases which deserves special considera-

tion under my theme: cancer on the borderline of the inoperable.

Whether the disease is medical or surgical, operable or inoperable, from the point of view of the patient, it is one of hope or of despair, of comfort or of discomfort, of prolongation of days, even if these days are, like those beyond three-score and ten, made up of strength, labor and sorrow.

This is a subject pregnant with the teaching of experience. From the point of view of the patient come the most important and effective considerations, and the surgeon must be guided in the assignment of the case somewhat by the patient's own wishes. The patient may wish to take desperate chances, or she may not. What is our duty in the matter? For example, what shall we say in helping her to decide whether to submit to an hysterectomy or not, when there is cancer of the cervix of questionable extent? Is there any variability in the line between the operative and the palliative treatment of cancer, or is it a hard and fast line, never to be overstepped? In the solution of this question, momentous in itself, many things come up to help or to embarrass us. The first is the personal equation of the operator; the second is his experience upon which, however, his personal equation somewhat depends.

When my friend of the conservative tendency denies to the sufferer from cancer of the rectum all operative measures designed for radical cure, and deliberately restricts the patient from the beginning to palliation, I cannot but recall the patients with rectal cancer, few though they may be, who have survived now these many years. When I see the frequency of recurrence after radical removal of cancer of the tongue, I fell almost convinced that in that disease there is no use in surgical art. I forget the patients, also few in number it is true, who have had many years of enjoyable existence.

My own personal equation in cancer of the rectum and of the tongue—my personal feeling—is that I would myself not submit to operation; and yet reason and experience tell me that by means of surgery present sufferings are diminished, and with a fighting chance of permanent cure; that in palliation present suffering is not diminished, whereas future suffering is increased; that, on the whole, even with the danger or rather the blessed chance of immediate operative euthanasia, radical operation is best, and with a definite chance of permanent cure.

This, I believe, is the real reason why we feel as we do toward the surgical treatment of cancer—we do not see the cases until too late. I believe that cancer, recognized as early as we recognize it on the lip, where it is so conspicuous that it cannot be overlooked, will, in all parts of the body, yield permanently to wide excision; but if it is left until its presence in inaccessible regions can be detected by the touch, or in accessible ones until it interferes with function, or causes excessive pain, I am convinced that its cure, by any method, is the exception.

Hence the depressing effect of large experience upon the surgeon's hopefulness, when he cannot but be impressed by the inadequacy of his operation and the certainty of recurrence.

Prognosis is here again the thing that guides, and unfortunately it is determined far too often by the prevalence of the advanced and hopeless cases.

The borderline between medicine and surgery in the cases in question would be far advanced into the territory of medicine were it not for the delay in diagnosis and the corresponding gravity of prognosis.

I dislike to say it, but it must be said and repeated until deaf ears listen: The hopelessness of cancer comes largely from errors in recognition on the part of the physician. I write these words filled with a just indignation because a young woman has been "treated locally" for a year, while cancer of the cervix uteri has been going from operability to inoperability. The hopelessness of cancer comes largely, also, from faith in any remedies except wide-margin excision—from faith in X-ray treatment, in toxines, in trypsin and amylopsin, and in a host of remedies which, for one reason or another, have had their occasional apparent cures. What said Dr. Holmes? "What is the meaning of these perpetual changes and conflicts of medical opinion and practice, from an early antiquity to our own time? Simply this —all methods of treatment end in disappointment of those extravagant expectations which men are wont to entertain of medical art." One single case of proved breast cancer, or uterine cancer, cured by any treatment other than broad and deep excision is to me beyond belief. I feel justified in the strength of this statement in a list of recorded cases since 1890, of which the breast tumors alone make 1300. The cure of deep-seated cancer by any method except excision is, I repeat, beyond credibility.

There is, in alleged cures, always a possibility of error. There is no borderland between medicine and surgery in cancer, except in the case for any reason inoperable.

What greater tragedy can we find than that of a woman who has consulted me since the above words were written. And how can any man view with an untroubled conscience such a result of palliative treatment?

A woman of forty-five, a dressmaker, supporting herself and others, but now unable to work, was put under X-ray treatment for tumor of the breast some three years ago (Vol. 82, p. 161). There had been no cancer in the family. Three and a half years ago the patient noticed a small lump in the right breast, after having been struck in that breast by a woman's elbow. Her physician advised her to go to an eminent specialist in X-ray treatment of cancer. This physician discovered a similar tumor in the left breast. The tumors were treated three times a week for one year; then twice a week, and then once. In the meantime the right breast got "twisted in and drawn down to one side and very painful." At the end of the third year, the patient says, the physician congratulated her upon being so well, and told her that she was a very fortunate woman. She was still told to come once a week. Five weeks ago she was advised by him to have an operation and then more X-ray treatment.

There is now an infiltrating tumor of the right breast, which I think has involved the *pectoralis major* muscle and the thoracic wall. The nipple is drawn in and to the lower internal quadrant, where there is a deep sulcus. The axilla has a chain of glands enlarged to the size of an egg, and extending to, and I think above, the first rib. The patient is somewhat cachectic.

The left breast has a small, movable benign tumor without involvement of the axilla. The case is practically inoperable, but it is one in which an attempt should be made. I class this case among those in which the disease is almost sure to recur. I have several times removed the bulk of such tumors for X-ray treatment, but I have never seen a cure. The diagnosis here is scirrhous cancer, of which there is not the slightest doubt. In the beginning, the case must have been, by operation, highly favorable for permanent cure. There is now practically no chance. The patient is nervous and frightened.

Is there in the minds of those who apply new methods of treatment an inability to see and realize facts?

The deadly course of this tumor must have been easily perceptible from the beginning. So many times I have seen patients dying by inches under all sorts of diseases and all sorts of treatment, and yet being told—they and their friends—that they were "improving," that reports of favorable progress in hitherto incurable diseases, under new methods of treatment, excite almost derision; the word *improving* in cancer treated by X-ray, toxines, ferments, extracts, has to me a most sinister significance.

And I would not relegate all these cases to the surgical side of the borderline either; there are plenty of cases of cancer so situated that excision is impracticable, and yet cases so limited that these methods have less extensive disease to combat than in operable and defined tumors, as of the breast. A constricting nodule in the œsophagus, an infiltrating cancer of the cervix uteri, the pylorus, the orbit, or the base of the tongue—all such cases of inoperability may well be selected for the trial of the so-called "improved" methods of treatment. Similarly, superficial epitheliomata which cannot be removed without great deformity of the face or destruction of an eye, may well be subjected to the destructiveness of the X-ray.

But there are regions in which malignant disease is, from its situation and environment, inoperable. The surgeon's art can only palliate. This line separates medicine and surgery, as regards radical operation, but not as regards palliation.

Take cancer of the œsophagus, with starvation; cancer of the intestine, with complete obstruction; what does the patient's good indicate in such hopeless conditions? Shall we relegate all such to the physician, that he by his art may diminish suffering and allow a peaceful ending? Shall we deprive the patient of two or three years of comparatively comfortable existence in order that he may pass, with dulled brain into oblivion?

In matters of this kind it seems to me there should be no dispute. It is our duty to prolong existence in every way we can, even if that existence is painful. The real decision rests with the patient. We may advise him to submit to operation or not, explaining truthfully the issue. He is himself, with the aid of his family and friends, to decide. Finally, from the patient's

point of view, there is always the possibility of error. In my observation, cases of erroneous diagnosis multiply, and therefore cases of erroneous prognosis—cases in which failure to operate means death from a perfectly remediable cause, such, for example, as foreign body diagnosticated as cancer, actinomycosis, tuberculosis, inflammation, and many other conditions.

Hence the necessity of always taking into account the factor of error, before we abandon to hopeless palliation an operable case.

From the point of view of the physician and surgeon, the inoperable case must be considered chiefly in its ethical aspects. It is fair, too, to consider the effect upon the physician and the surgeon in our manner of dealing with the inoperable.

The illustrative cases which come to my mind most vividly are those of recent observation. I sometimes think that the time to write one's views upon any particular theme is when that theme is fresh in one's mind. If, as Thoreau says, the forcible writer is the one who has been there in person, the vivid writer should be the one who writes under the inspiration of the present. The horrors of the Commune, for example, are most vividly portrayed when the writer is under their immediate impression—more forcibly, too, and, best of all, more truthfully. I have read a vivid account of the siege of Vicksburg, written by a refined, intelligent woman, who had the misfortune there to suffer the privations of the prolonged siege. He who can write forcibly upon experiences of which he has read, can write much more forcibly upon those he has had; and he who describes vividly the feelings of the past can describe much more vividly those of the present. And even the torpid writer must wake up in depicting the things of present interest. Thoreau's own delightful journal was written notebook in hand, as he contemplated nature.

In using the following cases to illustrate my views, I write while deeply under their depressing influence. And yet that surely is not so fair a conception as the one which is based upon a general review of the whole subject, considered from the standpoint, as it were, of the historian; for a calm and judicial verdict cannot be rendered under the excitements, prejudices and passions of the moment. Be that as it may, the accidental presence, at my office hour, of two patients upon whom I had operated for

cancer of the tongue gives a vividness to my impressions of the surgical treatment of this disease; and my tendency is perhaps to express myself too forcibly upon this part of my subject. But it gives me a chance to take account of stock, as it were, of two cases on the borderland of the inoperable.

The first I operated upon for cancer (Vol. 39, p. 132) of the tongue seven years ago. After the first operation the patient was well for several years. He passed the absurd three-year limit in perfect health. A local recurrence appearing two years ago required an operation which took in part of the tonsil and soft palate. Since then there has been no local recurrence, but a recurrence in the neck, which was thoroughly dissected in the beginning. The third operation was very extensive. It was performed in November, 1908. There is now an involvement of the parotid, and, in my judgment, the case is inoperable.

When this patient first came to me the disease was not extensive; the case was a very favorable one, and I treated it by an extensive dissection, as all malignant disease should in the very beginning be treated.

The second patient (Vol. 81, p. 87) had been treated for gumma, like so many cases of cancer of the tongue, until the case was, at my first examination, apparently inoperable. The man was young, vigorous, and determined to take the last and smallest chance. I removed the whole tongue through the neck. and made an extensive dissection in the neck itself. The operation was performed on January 5th, 1909, and there is already a hopeless recurrence.

A third patient, an old man, operated upon within three months, died a week or two after extirpation of the whole tongue.

Here, then, are three recent experiences with a most sinister lesion. In all the cases the most radical operations were performed. The question is whether there is a borderline between operation and palliation, across which the surgeon is inclined to trespass to the injury of the patient, his art, and his own reputation.

Are the teachings of pathology, of surgery in general, and of one's own experience in particular, inadequate to protect the patient from useless mutilation, the art of surgery from predictable failure, and the surgeon's own reputation from meddlesome interference with hopelessness.

In the answer to this question,—and my answer applies to cancer in other places, particularly where wide-margin dissections are impossible,—one cannot but be influenced by his personal equation, and especially by his natural hopefulness and his ability to forget painful experiences.

And here let me digress a moment, led by the association of ideas to consider the value of experience and President Eliot's recent utterance at St. Paul upon the subject. But the great Designer showed, in the sequence of intellectual inheritances, the wonderful wisdom of creation, for who could doubt what would be the effect upon the progress of medicine and surgery if our successors could begin their work influenced exactly as we are by our own experience, where we lay that work down? *Experientia omnia docet;* it teaches the individual up to a certain point, and it makes him, to a greater or less degree, wise; but it makes him timid, cautious, and disinclined to disobey the traditions of the past. The beginner who has to learn in the dear school of experience strikes out for himself. He discards the warnings of his elders; he does harm in grasping for good in so doing, but he seeks and secures good that is new: he leaves beaten paths and makes new ones. Hit or miss, he brings to bear the originality that is in him, untrammelled by the teachings of a passing generation, with an aggressiveness that overthrows all traditions, musty and valuable as they may be. I have followed in imagination the course of the physician through coming ages, could he retain his bodily and mental vigor, and live to be as old as Methusalah, and I am always brought to the conception of a powerful intellect brought to a standstill by the accumulated experience of centuries; to a body which, as it were, has ceased to move in any new direction, retarded and silenced by its own ideas and environment; not unlike the moon, which, through the friction of its ancient tides, has ceased to rotate on its axis faster than it revolves about the earth, which itself will, for similar reasons, losing a second each hundred years, one day rotate upon its axis but once a year!

And therefore in tracing the borderline between the operable and the inoperable, I am guided by my own observations; but these observations do not prevent; they rather help; they are intended to help younger men in blazing a new trail, a fresher

and more reliable and more productive area of professional attack.

It is beyond the scope of my paper to consider in detail all the cases in which the surgeons have overstepped their line, and the physicians theirs; but in gastric diseases, it seems to me, the wise example of the leaders in surgery has been outstripped by far too many of their followers. I have often thought when some new procedure has been introduced—and I recall the ephemeral existence of many—that its worst enemies have been its friends, as in the treatment of prostatitis by castration or vasectomy, or the treatment of all female pelvic ills by oophorectomy. After many years, the true value of new methods, whether medical or surgical, becomes evident, after a full and patient presentation of the evidence before a jury made up of the whole profession. It seems but natural that enthusiasts should go to extremes, and perhaps it is as well that extreme views as to indications for operation and as to methods of operation should prevail, for it is only after a wide diversity of opinions and experience that a safe *mean* is deduced from unsafe *extremes*.

In gastric surgery, I am convinced, there lies a wonderful amount of good, but, through ill-considered indications in special cases, a vast amount of harm. The trouble is in the field of gastric surgery, as well as in other fields, that what is good for one disease is useless for another. The line is overstepped wantonly and unjustifiably, and failure cannot but result. I am seeing every day the evil results of operations based upon faulty indications—the failure of surgical methods of treatment when medical were fully competent, and were by no means exhausted. We surgeons must remember, when we are inclined to hasten into the field of stomach diseases, how really infrequent, as Richard Cabot has recently shown, are real organic lesions, as compared with functional ones. When positively indicated by organic changes, I know of no more brilliant surgery than that upon the stomach, led by the Mayos, Moynihan and others.

The borderland of medicine and surgery has been explored so many times that little is to be learned of it; but we must not forget that serious and remediable organic disease may exist without our being sure enough of the diagnosis to run the risk

of losing precious time. This uncertainty of diagnosis, with the great safety of surgical technique, indeed does seem to justify in cases of doubt an exploration of the borderland.

But the tendency has been, I think, to multiply explorations beyond all reason; first, because they are so safe; and secondly, because diagnoses are always uncertain. I have nothing to say against explorations in any cases that belong to debatable groups, provided the prognosis of the suspected and thoroughly-studied lesion is grave under delay. When the patient by delay must lose her main or only chance, if the suspected disease is really present, it takes a greater responsibility than we should be called upon to bear to refuse an exploration. But the indications for exploration—safe though exploration may be—demand the most painstaking effort at diagnosis; and it seems to me that the tendency has been toward inadequate and loose methods of diagnosis, and the resulting exploration, rather than toward careful and precise methods, with a resulting positiveness that makes exploration unnecessary.

In debatable cases I admit that failure to convince myself that a disease remediable by surgery is not present should lead to operation; but I do not admit that diagnosis is so impossible of cultivation and so radically inaccurate that we cannot in the vast majority of cases save our patients from unnecessary operation.

Take many cases of cancer of the liver, of the stomach, of the abdominal viscera generally—explorations in most cases are absolutely unnecessary, unjustified even by human fallibility. The trouble is that, with the possibility of demonstration, we do not take all the pains that we might.

The exploratory operation is for cases in which error is quite possible, and the disease, without surgery, hopeless, but with surgery, hopeful.

In giving an impartial verdict on the results of treatment, we must never forget the influence of *bias*. In medicine we can learn much from the processes of law, which, however complicated, were originally designed for the detection and demonstration of the truth, the whole truth, and nothing but the truth. The original design has been bettered by long years of practical experience. Evidence upon which truth is based is carefully

guarded lest error creep in. All parties to a cause are selected for impartiality. Bias, partisanship, advocacy are confined to the attorneys. What can we do in a cause like that of the X-ray treatment of cancer, or any radically new treatment of well-known diseases? The physician or surgeon states his case, presents his evidence, makes his argument. At the same time he is judge and jury. Many and many a case—in fact, most cases—are presented to our profession without a single effort at control. The poor reader takes the *ex parte* evidence as truth and finds so quickly and universally that he himself cannot get such results that he is only too inclined to throw out all statistics. In this he goes, of course, too far the other way.

There is, in too many instances, a tendency to see results of treatment that do not in reality exist, as in the case of the poor woman with cancer of the breast, which has been sprouting under the X-ray. In the time when testicles were being excised for enlarged prostate, I saw two castrations, in both of which the patients, immediately upon severance of the spermatic cords, emptied their bladders most vigorously all over the surgeon and the operating-table. Wonderful effect of castration upon prostatic retention!

It is not always practicable, but it is extremely desirable, that there be an impartial and accurate control over the results of medical and surgical treatment.

The borderline between medicine and surgery will never remain a fixed one; nor will that line of invasion held by the skirmishers of aggressive surgery always be advancing into the territory of medicine. I am fully persuaded, for example, that the surgery of malignant disease will become in the near future a thing of the past. A single case of undoubted sarcoma, cured beyond question by Coley with his toxines, demonstrated to me the possibility of non-operative cure, and his subsequent successes have engendered a strong hope.

Though I have not seen as yet a single real cure of real cancer (beyond that of the X-ray in superficial epitheliomata—itself a destruction and therefore a surgical process—I believe that the time is not far distant when we shall see real downright deeply-seated cancer cured by some non-operative method; and when I see one single success of this kind, I shall be as fully convinced

of ultimate success as I was of the eventual success of aviation when I read of the first flight of an aeroplane. But the first element in estimating progress is, as I say, a fair and accurate control. We have had too many claims of success, which time has shown to be unfounded.

In the treatment of cancer the borderland fight is hottest. The battle is between friendly and generous foes. Indeed those of us who are carrying the fight against cancer into the heart of the enemy's defences are only too eager to lose the victory; and we long with a great longing for the time, soon to come, when in the fight against malignant disease we may turn our swords into plowshares and our spears into pruning-hooks—our scalpels into hypodermic syringes and our scissors into medicine-droppers!

RADIUM THERAPY*

BY HERBERT A. BRUCE, M.D., F.R.C.S.,

Associate Professor Clinical Surgery, University of Toronto; Surgeon to the Toronto General Hospital.

Being interested in the question of the value of Radium in the treatment of malignant diseases, I spent some time this summer seeing the work at the Radium Institute in Paris, under the direction of Dr. Louis Wickham. This Institute was established by Armet de Lisle, who is, I think, the sole manufacturer of radium in France. He stands the entire expense of the Institute, and poor patients are treated there, as well as those able to pay a fee. He has supplied the Institute with about $150,000 worth of radium, and in return for this, by arrangement with Dr. Wickham, he receives part of the fees paid for treatment.

They have a very large clinic, which Dr. Wickham found he could not handle alone, and was obliged to take in Dr. Dominic as his assistant. It is quite clear that a very keen interest is being taken in the possibilities of radium as a cure for malignant disease, by the public generally, as well as the profession.

I found Dr. Wickham most kind and courteous, and anxious to let one see the method of application and the results obtained. He is very careful and conscientious in his work, not overly enthusiastic, but disposed to be fair in his estimate of the value of radium as a therapeutic agent. He told me that he did not feel at all confident as to its curative action in carcinomata, but so far as his experience went, he found it to be of the greatest value in angiomata.

It might be well, first of all, to give you a short account of some of the properties of radium. Monsieur Pierre Curie and Mme. Curie share the honor of having discovered radium in 1898. P. Curie experimented on himself, and concluded that radium would prove of use for medical applications, and he gave a tube of radium to M. C. Danlos, physician to the Hos-

* Read before the Surgical Section, Academy of Medicine, Toronto.

pital of Saint Louis. This was really the starting point of a new branch of physio-therapy.

In 1901, Becquerel put a tube containing pure radium in his waistcoat pocket, when his assistant, M. Matout, remarked on the imprudence of this act; but Becquerel paid no attention. He carried the tube in his pocket for a number of hours, and fifteen days later the skin underneath the pocket containing the radium was found to be in a sufficiently inflamed condition to cause M. Beonier to attribute the inflammation to the action of the radium. This was the famous "burn of Becquerel." the remembrance of which is still clear in the memory of many doctors. who considered the action of radium to be of the nature of a burn.

At the beginning of the year 1905 radium was supplied Dr. Wickham to study its action in certain diseases.

The Curies obtained the radium from pitchblende. A few tenths of a gm. only of radium chloride can be extracted from a ton of pitchblende. Just here it is interesting to note that pitchblende has been found near Ottawa at a village by the name of Ville Neuve. It is also thought that it can be obtained along the north shore of Lake Superior. Pure radium has a radio-activity of 2,000,000. There are three kinds of rays emitted from radium—(a) the alpha rays, (b) the beta rays, (c) the gamma rays.

The work of differentiating these rays was done by Rutherford, who showed that they have different qualities. The most important quality, as far as we are concerned is their penetrating power. The alpha rays have the least power of penetration. being stopped and absorbed by the first layer of tissue; the beta rays penetrate further, and the gamma rays the farthest. The beta rays are divided into soft, medium and hard rays.

It is possible to filter the rays by placing different screens between the radium and the skin. By interposing metallic screens of various thicknesses and densities a smaller or greater number of rays may be cut off, and thus we can regulate accurately the dose. By the use of lead one can cut out all the alpha rays and the soft beta rays and only allow the hard beta and gamma rays to pass through.

Apparatus Used.

The first apparatus used consisted of a glass tube containing radium, the grains of which lay loosely like corn in a sack. This simple apparatus is of great service, though its application is limited. It can be introduced into a fistula, and into natural or artificial orifices. In the treatment of cancer of the rectum or prostate the radium tube can be put into a catheter and then carried to the desired point.

In March, 1905, Wickham introduced what he calls his varnish apparatus. Radium is incorporated in varnish, which can be spread on two kinds of material, either a rigid form on a metallic base, or a flexible form on a linen base; the latter he calls "Appareil toile" or "Toiles radiferes." These rigid and flexible apparatuses can be applied to any region. They can be made round, square, cylindrical, etc. The radium salt is melted in a liquid varnish at a very high temperature, and in the process of cooling it becomes very hard and solid, like enamel; while hot this varnish can be applied to the metal or the linen base and the apparatus thus obtained be employed naked, but it is best for hygienic reasons to protect it with a cover of India rubber. Any kind of screen may be used with this kind of apparatus, and it should be made as follows: The apparatus is first covered with rubber tissue to protect it from contact with the hard screen; the screen is surrounded with 10 or 20 sheets of paper, and outside this a piece of India rubber. This paper covering is very important because when the rays cross the metallic screen new rays are formed, so called secondary rays described by Sagnac. These rays have a very weak power of penetration and might irritate slightly the surface, and it is necessary to stop them, and the sheets of paper will accomplish this.

The specific action of weak penetrating rays is exercised specially on the surface and the specific action of "rayonnements surpenetrants" is exercised not only on the surface tissue, but also in the deeper tissues. One obtains the specific action and not the destructive action by modification of the dose, *i.e.*, the duration of the applications.

Wickham says that eczema can be treated on a baby with the most powerful apparatus, and with its full strength, providing the duration be not longer than one or two minutes, and

can be repeated in from three to four days. Then, it is clear that a selective action can be exercised on lesions of a different nature. Wickham says that radium has such an action, and this action can be utilized in the deeper tissues without injury to the surface of the skin. The rays which he calls "rayonnements surpenetrants" consist of a very small number of rays which act after being applied for a long time, *i.e.*, they are weak but very penetrating and if left in contact for a short time they have no effect, but after many hours sufficient energy has been accumulated to give a result.

To put it in another way, we take an apparatus of primarily great power; he interposes between this and the skin a filter which only allows a small number of rays of high penetrating power to pass; this apparatus is left in position for five or six nights, and in this way a sufficient dose accumulates to modify the growth at a distance, and is applicable to deep-seated cancers. He says that he has sometimes seen better results when the applications of radium were made every second night instead of every night.

He modifies the quantity by interposing different densities and thicknesses of screens, so that first the alpha and soft beta rays will be cut off and absorbed, then the medium beta, then the hard beta; thus in each case the number of rays having the power to filter through the screens is in a decreasing quantity. Secondly, as screen after screen of increasing density and thickness is interposed the rays, in proportion to their number, will have greater and greater powers of penetration; thus the quality of radiation is changed, because the average of its penetrative power is increased. So that as the rays diminish in number the duration of the application must be increased, and, therefore, he gives the following rules of treatment:

1. Apparatus applied naked. Rays numerous; special action on the surface; duration of application short.

2. Apparatus with interposition of medium filter. Rays less numerous; action on greater thickness of tissue; duration of application longer.

3. Apparatus with interposition of thick filter. Rays very few. Action on very great depth of tissue; duration of application very long.

In measuring the strength of radium it was customary to say

that a tube which contained 5 mg. of salts of bromide of radium would have an activity of 500,000. Wickham says that this is not the proper way to speak of it, but one should be able to measure the rays given off externally which can be used: for example, he says with the above quantity of radium there would be of alpha rays 10%, of beta 85%, of gamma 5%. He destroyed an epithelioma after thirteen applications within 22 days, each application being one hour in duration, giving off rays with an activity of 50,000, with alpha rays 0%, beta rays 85 to 90%, and gamma rays 10 to 15%. Another case of ulcerating epithelioma of the nose was cured by using the same strength of radio-activity, by eight applications, one hour each, every third day. Two cheloids entirely disappeared on three applications of 30 minutes every four days, with an apparatus of 48,000 radio-activity, made up of 0% alpha rays, 89% beta rays, 11% gamma rays.

He first used for a screen pressed absorbent cotton of about the thickness of 1cm., surrounded by gold beaters' skin, and then pieces of aluminum to reduce the power of the activity of the rays. Many substances will do as screens, *e.g.*, silver, copper, lead, aluminum—the last two being the best.

Radium furnishes in addition to its rays a gas, called "emanation," which Wickham has utilized. Substances can be rendered rich in "emanation" by being brought into contact with "emanation" itself or by incorporating the substances with soluble or insoluble salts of radium.

M. Jaboin, chemist at the French Institute of Radium, has succeeded in rendering a whole series of substances radiferous, in the desired proportions, and according to prescribed dosages These include radiferous quinine at a degree of half a microgram, that is to say, half a thousandth of a milligram of the pure radium for 0.20 of quinine. There is also some radiferous mercury, and some other substances. The quantity of radium is, of course, very small; but, at any rate, it is greater than in the radio-active natural waters.

All these substances have been used for some time, and are perfectly well supported by the organism. M. Jaboin, in his work at the Hospital St. Lazare, has made a certain number of injections of radio-active grey oil and iodide of mercury, and the urine after each injection showed radio-activity.

Water has been made radio-active.

Wickham has a hard vaseline made radiferous; this he has tried under new growths, applying radium on the external surface at the same time, and thus getting a double action or what he calls cross-fire.

Injections d'eau radifere et radio-activee.

Radio-active water and radium water have been used. The former is made radio-active by emanations or being exposed to the rays. The latter contains a small quantity of bromide of radium. These have not been used to any extent, and it cannot be said if they will be found to be of any use.

Bactericidal Radium Rays.

Radium rays have not been shown to have any bactericidal action, although in certain cases its use has been followed by the arrest of suppurations due to staphylococci and gonococci. Their laboratory researches have shown that it did not affect the culture of these organisms in a reasonable time; but radium water with an activity of 1/1,000,000 seemed to act on the culture.

Cancers were the objects of Dr. Wickham's first researches.

Wickham says that from a therapeutic standpoint radium has a much greater sphere of usefulness than that due to its destructive effects. Its value consists rather in its specific action in regard to special diseases—that is to say, its elective action—the radiations having a special action on some diseased cells, which is different from its action on normal cells. The radiations are able to cure some diseased tissues without either irritating or inflaming them if the doses are rightly administered. This selective action is not exercised upon every kind of diseased tissue; amongst those which are influenced by it he recognizes four principal morbid groups. They are: First, eczema; secondly, angiomata; thirdly, keloids; fourthly, cancers.

So far Wickham has obtained the best results in the treatment of angiomata. He has also obtained striking results in rodent ulcers and superficial cancers, such as epitheliomata. He thinks with this selective action of radium he will be able to affect in a curative way deep-seated cancer without the radium injuring or irritating the skin. With this idea in view a number of experiments were tried as to the effect of radium upon malignant disease of the breast; radium was only used on those cases which were too advanced for surgical intervention. He sum-

marizes his results after trying this treatment in a number of cases of carcinomata of the breast as follows:

(1) Radium can cause a carcinoma of the breast to retrogress so as to give, in a certain way, the appearance of a cure.

(2) Radium can sometimes render operable a cancer primarily inoperable.

(3) Radium has acted favorably on some relapses occurring after operation.

(4) It has acted also on some surrounding infected glands.

(5) In desperate cases it has sometimes relieved pains and diminished, for some time, the hemorrhage and the secretion coming out of the ulceration, and so has prolonged life.

(6) Radium can be utilized after the operation as a preventive means against return.

He says that these different services rendered by radium are not absolute; they are limited to cases not very extensive, and sufficiently localized.

A large quantity of radium is needed for each treatment, which is a serious drawback to its use.

Wickham told me that he would not think of using radium in an operable case of cancer of the breast. He did not think that it should be allowed to take the place of the knife except in inoperable cases or after operation when he thought the use of radium advisable.

The method of so-called cross-fire is as follows: An apparatus is placed on one side of the tumor and another exactly opposite to it; at each application these apparatuses must be left in place a sufficient time just to escape causing an inflammation of the surface, during which time the superpenetrative rays cross each other and augment the intensity of their action in the deeper tissues. It reduces the length of application, consequently the length of treatment.

The result of the treatment of carcinomata of the mucous membranes is not so favorable as those superficial cases affecting the skin.

I saw several patients whose photographs showed that they had had large vascular tumors, and in whom the tumor had entirely disappeared; also cases in which keloids had been similarly removed, and some cases of rodent ulcers and superficial epitheliomata, which had been successfully removed by radium.

The most striking results obtained by radium were in those cases of large angiomata in children. I saw one case of a very large angioma affecting the scalp and forehead cured by radium with scarcely a perceptible mark to show where it had been, and also a case of port-wine stain affecting the half of the face, the ear and the side of the neck, in which the color had been completely restored to nearly all, in fact as much as had been submitted to radium treatment.

That in radium we have a substance of wonderful therapeutic value there can be no doubt. Just how valuable it may prove to be in deep-seated cancers cannot at the moment be foreseen, but if it is only capable of retarding the growth and thus prolonging life it will serve a useful purpose.

The great cost of radium will necessarily limit its use. It would be a great thing for Canada and the Province of Ontario in particular if some wealthy, public-spirited citizen would come forward and establish a radium institute in our midst. Such an institute is being established in London owing to the interest and energy of His Majesty King Edward, and with the help of Sir Frederick Treves, Sir Malcolm Morris and others. Another institute is being established in New York and it is to be hoped that we will not long be behind in Canada.

I cannot close this brief account of radium without paying tribute to Dr. Louis Wickham, whose great work has placed the use of radium on a scientific basis, and who will, I am sure, within the next few years add still more to our knowledge of this new and valuable therapeutic agent.

64 Bloor Street East.

School Hygiene

PUBLIC HEALTH IN THE WEST

Public Health makes progress in the West. In Saskatchewan, they have already a Minister of Public Health, and in British Columbia, the Hon. Dr. Young, Minister of Education, has just brought in a bill for the medical inspection of schools. The four members of the Opposition of course opposed, and brought on all the time-honored arguments on the occasion of the debate, on February 5th. When the bill was in the committee stage, Mr. Hawthornthwaite moved in amendment to strike out the words leaving to the Provincial Board of Health the discretion to provide other than a medical man for school inspection. He said that it would leave a loophole for the Board to employ some raw medical student to practise by examining the children for their physical defects.

Mr. Jardine asked whether these yearly examinations provided for in the bill were sufficient. Should any difficulty arise in the meantime, should not the school trustees have the right to call for a doctor?

Hon. Dr. Young said the bill provided for that. The annual medical examination was not to deal with acute but chronic disabilities. A doctor could be called in any time for acute cases.

Mr. Hawthornthwaite asked why it was necessary to examine a whole class because one or two children were backward. Why not confine the examination to them? Otherwise, it would benefit the medical men by placing hundreds of children otherwise healthy under the doctor's care. Before the bill was rushed through the House, they should have further time to consider its clauses.

Hon. Mr. McBride said the member for Nanaimo was very inconsistent. When the bill was introduced, he was loud in its praises, but now he claimed that it left the door open for the examination of children by sanitary inspectors, horse doctors or other incompetent persons. The very reverse was the case, but they did wish to provide that, in remote districts, where a doctor

could not be obtained, the Board of Health might employ a trained nurse or sanitary inspector for the performance of their respective duties. If they had confidence in the Board of Health, they might feel sure its powers would not be ill-used.

Mr. Williams said the bill was one of the best in principle the Government had ever brought down. His only fear was that in the rural districts they would get the small end of it. For that reason he would support the amendment of the member for Nanaimo. He would like to see the bill held over for a little while, that he might consult with his constituents.

Hon. Dr. Young denied that the bill would be any hardship in rural schools. Where this plan had been in operation the expense had never been more than 15 cents for each pupil. The charges would be a matter of arrangement between the Provincial Board of Health and the doctor employed.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; Surgeon, Hospital for Sick Children, Toronto; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopedic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Physiology:
A. B. Eadie, M.D., Toronto.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto, Editor, The Canadian Nurse.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Bremer, M.D., Mimico Insane Asylum; Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Assistant Ear, Nose and Throat Department, Toronto General Hospital; Senior Assistant Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

THE EXPENSES OF THE FACULTY OF MEDICINE OF THE UNIVERSITY OF TORONTO

THE Report of the University of Toronto for the year ending 30th June, 1909, shows that the salaries paid to professors, associate professors, demonstrators, assistants, associates, and also for general services in the Faculty of Medicine amounted to $54,552.16; in the Department of Anatomy, anatomical material cost $1,793.90; chemical materials, for preservation, etc., $450.84; incidental expenses, $651.00; in the Department of Pathology and Bacteriology, chemical supplies, apparatus, microscopes, and incidentals cost $940.89; in Pharmacy and Pharmacology maintenance, fittings, merchandise account, cost $1,206.00; in departments other than the above, the expenses were $360.85; the maintenance of the Medical building cost $6,994.91; the general expenses of the Faculty of Medicine, $1,735.18; Hospital Laboratory at St. Michael's Hospital, $549.71; total, $69,235.44.

This total, as given in the Report, does not include the full expenditure incurred in teaching Medicine at the University of Toronto, and, in order to get a clear insight into the subject, we have been obliged to make some calculations of our own. It is stated in the Report that the Biological Building and Department for Maintenance of Building, fuel, light, water, repairs, etc., with maintenance of the department,

specimens, supplies, fittings, microscopes, service, etc., cost $8,110.71; the Department of Physiology and Biochemistry cost $2,593.23; the Chemical Building and Department cost $9,764.46; the Department of Physics cost $13,470.56.

Now, the Faculty of Medicine could not give the full training called for in the curriculum to undergraduates, without the co-operation of these departments. In the Department of Biology, there were altogether 666 undergraduates in attendance, 288 of whom (43.24 per cent.) were undergraduates in Medicine. In the Department of Physiology and Biochemistry, there were altogether 467 undergraduates in attendance (including veterinary students), and 175 (37.47 per cent.) were undergraduates in Medicine.

In the Department of Chemistry, there were altogether 628 undergraduates, 289 of whom (46.02 per cent.) were undergraduates in Medicine. In the Department of Physics, there were altogether 550 undergraduates in attendance, 114 of whom (20.07 per cent.) were in the Faculty of Medicine. Basing the calculations on the percentages of undergraduates in Medicine in attendance, the share of the Faculty of Medicine in the expenses of the Department of Biology would be $3,507.07; the share of the Faculty of Medicine in the expenses of the Department of Physiology and Biochemistry would be $971.68; the share of the Faculty of Medicine in the expenses of the Department of Chemistry would be $4,493.60; the share of the Faculty of Medicine in the expenses of

the Department of Physics would be $2,703.54; total, $11,675.89.

The salaries in the Department of Biology amounted to $15,535.00. Applying the same rule of percentages, the Faculty of Medicine were chargeable with $6,717.33. The salaries in the Department of Physiology and Biochemistry were $10,525.00. The Faculty of Medicine were chargeable with $3,943.72. The salaries in the Department of Chemistry were $16,968.50. The Faculty of Medicine were chargeable with $7,808.90. The salaries in the Department of Physics were $15,143.00, and the Faculty of Medicine were chargeable with $3,039.20. Adding together these percentages of salaries chargeable to the Faculty of Medicine in the Departments of Biology, Physiology, Chemistry, and Physics, we have a total of $21,509.15. Adding together the ordinary expenses of the Faculty of Medicine, $69,235.44; the percentages due by the Faculty of Medicine for the maintenance of Biology, Physiology, Chemistry, and Physics, $11,675.89, and the percentages of salaries chargeable to the Faculty of Medicine in these four departments, $21,509.15, the total expenditure made on behalf of the Faculty of Medicine is $102,420.48.

Deducting from the aggregate expenditure, credited directly or indirectly to the Faculty of Medicine, the amount paid to the University of Toronto in annual fees by undergraduates in Medicine, viz., $82,121.50, we find that there is a balance of $20,298.98 to the debit of the Faculty of Medicine for the academic year 1908-9.

A recapitulation of the total fees, collected in all the Departments of the University from undergraduates of all departments, shows they amounted to $226,094.50, of which the fees paid in the Faculty of Medicine, viz., $82,121.50, would be 36.32 per cent. The debit of the Faculty of Medicine is easily met out of the Legislative grant (University Act, 1906), which was $422,232.43.

The undergraduates in Medicine pay their way handsomely. No allusion is made here to the cost of administration of the University, or the interest on capital invested in buildings and equipment.

J. J. C.

FORCED FEEDING IN TUBERCULOSIS

As the ability of a consumptive patient to gain in weight is looked on as desirable, forced feeding has been freely tried in the treatment of tuberculosis, and on the bill of fare flesh meat holds the first place. It is quite easy, however, to do harm by forced feeding. If the stomach and intestines of the patient function well, if the kidneys are not diseased, a liberal flesh meat diet will increase weight, without injury. However, the very opposite of such physiologic conditions is apparent in a good many cases of tuberculosis, for the common sequels of forced feeding are: dyspepsia, gastro-enteritis and high fever. The dyspepsia may be characterized by acidity, arising from over-stimulation of the gastric glands, or there

may be atony of the stomach, with dilatation, accompanied with fermentation of food. Moreover, gastro-intestinal fermentation, with the production and absorption of toxins, does more harm to the patient than forced feeding can do good, thereby causing the abandonment of this treatment. This latter eventuality becomes all the more necessary, because the employment of chemical antiseptics, which check peptic digestion, is useless and may prove injurious. A tubercular patient, whose digestion is labored and accompanied with oppression at the stomach, and somnolence, whose urine contains an excess of indican, is probably eating more meat than he can assimilate.

There ought to be a rule for the regulation of the meat allowance given to tubercular patients. Laufer, who has carried out a series of observations on this subject, contends that the amount of albumen ingested should be between 10 and 20 grains for each pound of body weight. Not more than 10 *ozs. of meat a day* should be allowed, because, if this amount is exceeded, the assimilative organs rebel and auto-intoxication ensues. Fat, in small quantities, he shows, exerts a useful controlling influence in respect of the metabolism of albumen,—taken in excess it passes away in the stools. Thus, the ingestion of 3½ ozs. of butter was followed by a fecal loss of 10.6 per cent., whereas the ingestion of 6½ ozs. gave 25.8 per cent. waste.

Farinaceous articles of food and sugar are usually absorbed with advantage by tuberculous patients,

especially if taken in moderation. In all cases, the quantity of food taken should be adjusted to the assimilative capacity of the patient, and this can be done by regularly taking his weight. If his weight is normal, he should eat enough food to keep up his weight,—if his weight is in excess, the quantity of food taken should be reduced. If he is losing weight, and is emaciated, the cause should be ascertained. If due to loss of appetite, an effort should be made to improve it, so that he may be able to take a liberal, but not an excessive, quantity of food.

Should the patient continue to lose flesh, in spite of a liberal diet, he should take a supplementary supply of nitrogenous food, and a richer diet than that required by healthy people. In doing so, he runs the risk of auto-intoxication, as the result of gastro-intestinal fermentation or of blockage of the kidneys, irritated by the passage of alimentary toxins. The use of buttermilk, which introduces a number of lactic bacilli into the intestines, tends to inhibit the growth of pathogenic bacilli in the bowels of the patient and checks intestinal fermentation.

J. J. C.

THE SLAUGHTER OF THE INNOCENTS

In 1907, the total births in Toronto, legitimate and illegitimate, were 6,900; the number of deaths of children under one year was 1,313, a loss of about 19 per cent. That this loss of infant life in Toronto would have been less, if all the dead infants had been

dowered with healthy, wealthy and wise mothers, goes without saying; that most of these infants would have perished, even if their mothers had every desirable mental and moral quality, and a fine social position, to boot, is true also. The statistics of the Registrar-General for 1907 show that, of the 1,313 deaths, some of the causes of death were: Premature births, 90; congenital debility, 198; congenital malformation, 18; ill-defined diseases, 82; other ill-defined causes, 75; pneumonia, 42; broncho-pneumonia, 40; acute bronchitis, 29; meningitis, 39; apoplexy, 8; convulsions, 53; measles, 11; whooping cough, 18; tuberculosis of lungs, 2; tubercular meningitis, 5; general tuberculosis, 6. Total, 706.

Thus, more than half of the infant mortality under one year, in Toronto, for 1907, was due to causes alien to the quality of the milk ingested by the dead infants, and the claim made by a Toronto newspaper, that the mortality was a dreadful example of the use of poor or uncertified milk, is untenable.

That there were deaths among Toronto infants, in 1907, which were traceable, partly at least, to poor milk, is true enough, for the statistics of the Registrar-General show that, of the 1,313 deaths of infants referred to, 56 were caused by gastritis and 192 by diarrhea and enteritis, diseases in which, warm weather, childhood, improper food, and bad hygienic surroundings are general predisposing factors.

If women cannot, or will not, wet nurse their own infants, certified cow's milk is the next best step; but

that statement must not be accepted as an unqualified endorsation of certified milk as the most important means of reducing the mortality of infants under one year of age. J. J. C.

THE NEW TORONTO GENERAL HOSPITAL

INDUSTRY is the price of success. As we look over the plans of the new Toronto General Hospital, and think of the time, thought, work and worry they represent, we feel lost in admiration for those who constitute The Board of Management, and realize that the architects believe fully in Edison's trite definition of genius. When he was asked, "Don't you believe genius is inspiration?" he replied, "No, genius is perspiration." So, observing, thinking and sketching have now taken the concrete form of "plans" for a complete, handsome and seemingly adaptable Hospital, and in the early spring ground will be broken and a building be begun that will be a credit, not only to its management, but a great benefit to the sick and the poor of our city. May we add a prophecy that perchance in this schoolroom some young Pisani of the scalpel may give to Surgery its Masterpiece and to Canada a more brilliant name than

> "Daughter of Men and Markets, bearing within her hold,
> Appraised at highest value, cargoes of Grain and Gold."

We have great pleasure in giving our readers a half-tone illustration of the Buildings and data, supplied

by the kindness of Mr. Flavelle, President of the Hospital Board. Though ever the busiest of men, he can always find time to be courteous.

As it will be noticed from the illustration, the Hospital buildings present a most imposing appearance, occupying the entire frontage on College Street from Elizabeth Street to University Avenue. The Westerly wings, towards University Avenue and South into the grounds, will be occupied by Medical and the corresponding wings on the East by Surgical cases. In these wings there will be 153 Surgical and 150 Medical beds. The wards will be large, open on both sides, and exceedingly well lighted. The centre building on College Street has accommodation for Administration, and in the two wings running Southerly from the centre are 36 beds for Eye and Ear cases, 39 beds for Gynecological cases, and upon one floor 34 beds for Semi-Public patients, a provision arising out of the original City grant to the Trust. On the top floor there will be 22 rooms for the House Doctors.

The Emergency Department (B) will be built and be completely equipped and supplied with an Ambulance and an endowment to maintain the Ambulance by two ladies, whose names cannot as yet be announced, but who turned in their benefaction to the Hospital at the instance of Dr. N. A. Powell, of this City. The Emergency Department will contain 9 beds. It is intended to send out a Doctor and Nurse with the Ambulance when accident calls come in, giving " first aid " at the scene of the accident.



THE NEW TORONTO GENERAL HOSPITAL

(a) Administration Building. (b) Emergency Department. (c) Out Patient Department. (d) Private Patients' Building. (e) Nurses' Home.
(f) Obstetrical Building. (g) Servants' Building. (h) Power House. (i) Pathological Laboratories.

The Out-Patient Department (C) will be capable of accommodating from 300 to 350 patients daily. This building is the gift of Mr. Cawthra Mulock, and will represent in its construction and equipment all that experience up till the present directs should be supplied.

The Private Patients' Building (D), in which will be only Private and Semi-Private patients, will contain 100 beds. A completely equipped Diet Kitchen will be attached to these wards and will be under the care and direction of a trained expert, who will give a course of instruction to all of the Nurses, who in turn will be required to take the course as part of their regular Hospital training.

Nurses' Home (E) will have accommodation for 174 women. Classrooms will be in the building, as well as an Infirmary and other accommodation for the Nurses, mostly in single bedrooms. Attached to the Nurses' Home will be recreation grounds solely for the use of Nurses.

The Obstetrical Building (F) will contain 40 beds and all necessary equipment for this Department.

The Servants' Building (G) will be fully equipped and comfortable in every respect for the accommodation of the servants employed in the Hospital.

The Power House (H) and Heating Station for all the buildings, including Laundry, will be in every respect modern and up-to-date.

The Pathological Laboratories (I) are to be built and maintained by the University of Toronto. The

full Pathological Department of the University will be accommodated in this building.

A few figures showing the enormous cost of the new Hospital will, doubtless, be interesting to our readers. Towards the estimated expenditure of $2,500,000, the University has contributed $600,000 and the City $200,000. The Board of Trustees have secured the permission of the Council to submit a By-Law to the Ratepayers, asking them to contribute a further sum of $200,000. If this is secured, the Trustees will have to obtain from private benefactors $1,500,000, and towards which they have now subscriptions in hand amounting to $950,000. It will be realized that the effort yet to be made to secure a further sum of $550,000 is one which will tax the utmost resources of the Board, and that they will have to depend chiefly upon large subscribers for this sum.

Many of our wealthy citizens have contributed largely to the Hospital Fund, and now Mr. J. C. Eaton has honored the memory of his father, Mr. Timothy Eaton, by the generosity of his great gift of the Surgical Wing, at a total cost of $250,000.

The proposed expenditure for land and buildings at the time that the original $200,000 was voted by the City Council was $1,250,000. The Trustees have certainly showed the best of judgment in acquiring the whole of the block of land rather than the half, as originally proposed. In doing this, they have also undoubtedly earned the sympathy of all public-spirited citizens, who are acquainted with the require-

ments for Hospital accommodation in the City, in adding 150 beds in the Public wards to those originally proposed. It will, therefore, be seen that the added size of the Hospital block, the added accommodation in the Hospital, and the increased expenditure for buildings over and above the earlier estimate, which is almost always inseparable from large proposals, have been the occasion for the increase in the proposed total expenditure.

The Trustees some little time ago laid before the Governors of The University of Toronto the enlarged character of the expenditure, and the added accommodation to be provided, and promptly secured their support, and the Government's concurrence in adding to their original subscription of $300,000 a further sum for a similar amount, making their subscription in all the magnificent sum of $600,000.

As this Hospital is to do a great work, in this City gradually growing to great proportions, it seems needless to appeal to all voters to support the By-Law soon to be " put " to the people. The extra grant from the City is wanted; it will be used wisely. A few remarks have been made recently by physicians and others as to the comparatively small accommodation afforded to " free " or City patients, as reported in the daily papers in answer to a question asked by Alderman Heyd. The number of free beds was estimated about 413. By carefully studying the plans, it will be observed that sufficient land will be left that, when necessary, the wards may be enlarged.

When one comes to learn, year in and year out, of

the class of patients who crowd these Public wards, not many, in proportion, are Canadians. Let us pray for more stringent immigration laws. Somehow the English immigrant, twelve months in this country, out of work and the father of eleven "imported" children, always finds his way, without the aid of a street directory, to the 'ospital. There he is a sick burden on the city. Pity the Hospital and all other sanely managed corporations intended to be of real service to "all the people."

> "The organized Charity scrimped and iced
> "In the name of a cautious, statistical Christ,"

is often the very worst enemy of the larger charity which opens its doors and says, "The world is my parish." This great Institution commands our respect, demands our aid and compels our admiration; but may we all be spared from ever having to enjoy its hospitality. W. A. Y.

Editorial Notes

Psychiatric Clinics

In an address delivered before the Hamilton Medical Society, April 14, 1909, Dr. C. K. Clarke, Dean of the Medical Faculty of the University of Toronto, made a plea for improved methods of dealing with acute cases of insanity. He contended that the asylum system of Ontario had not proved adequate for such a work, and that it could not be made adequate. The principal reasons for this incurable inadequacy, in his opinion, are: the association of acute with chronic cases in the asylums, and the neglect of research methods by the medical staffs. To overcome these evils, he recommends the establishment of psychiatric clinics, in which accurate diagnosis will be made, and suitable treatment provided for the earliest stages of mental disease, and moreover, where students and physicians would have opportunities to acquire some knowledge of psychiatry. Dr. Clarke regrets the absence of such institutions in Ontario, for, owing to frequent consultations with physicians in cases of mental disease, and the knowledge thus acquired, he is in a position to see the necessity of a change in present day methods, with the establishment of better facilities for the treatment of cases of acute insanity.

Taking the record of a year's admissions, viz., two hundred and sixty cases, of whom seventy-odd (27 per cent.) proved curable, Dr. Clarke maintained that many more would have been cured had the conditions of treatment been ideal, rather than "the best we can obtain under the circumstances." He also thought that many insane patients, who are admitted in a hopeless condition of chronic insanity, might have been cured had they been taken in hand early in the day.

Dr. Clarke's plea is certainly a very enticing one, and, coming as it does from a high authority on psychiatry, merits the sup-

port and adoption of the legislative and governing authorities, who can embody its teachings in law and put them to the test. Promising as it looks, it has to be measured by the standard of results. We hope that the results will prove to be a triumphant vindication of Dr. Clarke's opinions respecting the curability of acute insanity. There are asylums enough in Ontario to hold the chronic insane till death releases them. Besides, a little training in clinical psychiatry might be a useful discipline to the medical student.

The Making of Constitution

In an article entitled "The Making of Constitution," which appears in the January number of *The Pacific Medical Jaurnal*, Dr. T. B. Keyes, of Chicago, advocates subcutaneous injections of oil to overcome sickness, thinness and anemia. He contends that perfect nutrition and perfect combustive powers may be obtained if oil is injected, subcutaneously, in properly graduated doses. This applies not only to thin persons, but to those whose flesh is flabby and to those who are fleshy, but without sufficient oxidation powers to convert their fat into energy. He says, "The subcutaneous injection of oil stimulates the combustive powers and increases cell activity. The increased cell activity and combustive powers produced by oil injection give appetite. This peculiar condition of supplying both nutrition and appetite cannot be produced or brought about in any other way.

Applications of this treatment vary according to the nature of the case. A flabby, fat person, pale and sallow, with a poorly-nourished liver, or with Bright's disease; a thin, nervous person; a person with chronic inflammation of the lungs, or a cachexia from chronic disease or syphilis, should gain in weight and blood, and should therefore receive larger doses of oil than a fairly healthy individual who simply wishes to increase his cell activity and his powers of combustion and energy. There seems to be both truth and poetry in Dr. Keyes' treatment—truth, by con-

verting the thin and the delicate into the robust and healthy; poetry, by substituting beauty and artistic excellence for thinness, anemia and flabbiness. In cases of anemia, thinness and weakness noticeable after acute infections, excellent results are produced by daily massage with olive oil.

Outbreaks of Rabies in Ontario

During the past and present year, outbreaks of rabies in dogs have been noted over a rather extensive area of Western Ontario. Human beings, as well as cattle and horses, have been bitten by rabid dogs. Feb. 2, 1910, replying to Major Currie, Hon. Sydney Fisher, Minister of Agriculture, stated in the House of Commons, Ottawa, that 157 cases of rabies had been reported to his department during 1909 and 1910. The existence of rabies had been demonstrated in thirteen cases. No arrangement had been made to compensate the owners of the animals destroyed. This latter statement applies to the owners of cattle and horses, which, having been bitten by rabid dogs, contracted hydrophobia and had to be destroyed. Several persons who had been bitten by rabid dogs have been sent, at the expense of the municipality, or have gone of their own accord, to the Pasteur Institute, New York, for treatment. So far the development of rabies in any of these persons has not been noticed. At Galt, Berlin, and other towns in Western Ontario, by-laws providing for the muzzling of all dogs allowed to go abroad are enforced. Similar by-laws should be enforced throughout Ontario. It would be the cheapest and most humane method of stamping out rabies.

Analysis of Proprietary Medicines

The following extract from the 1908 Laboratory Report of Professor Amyot, of the Provincial Board of Health of Ontario, shows that thirty-five proprietary medicines were examined during the year for the alcoholic content, active constituents and diastase:

PROPRIETARY MEDICINES

Name of Preparation.	Alcohol by vol.	Constituents Detected.
Dr. Fowler's conc. extract Wild Strawberry	12.50	Peppermint, Tannin and Gallic Acid.
Campbell's Quinine Wine	14.95	Quinine.
Armbucht's Cocoa Wine	13.55	Cocaine.
Baxter's Mandrake Bitters		Vegetable Bitters
Fellowes' Compound Syrup of Hypophosphites		Quinine, Hypophosphites, Iron, Glycerine, Strychnine.
Wheeler's Tissue Phosphates	9.87	Quinine, Iron, Phosphates.
Churchill's Syrup of Hypophosphites	.60	Hypophosphites, Vanilla, Sugar.
Perry Davis Pain Killer	45.55	Camphor, Capsicum.
St. Michel Wine	13.30	
Eau de Quinine	59.52	Alcohol, Quinine, Aromatic.
Millburn's Rheumatic Pills		Aloes, Sulphate of Iron.
Starr's Rheumatic Cure		Turpentine and a Red Oil.
Wooldridge's Gout and Rheumatic Tincture		Iodides' Acetates, Carbonates.
Godfrey's Cordial		Morphine.
Psychine	15.78	Glycerine.
South American Kidney Cure	15.96	
Grippura	present	Iodides, free H_2S, Aromatics and Glycerine.
Father Koenig's Nerve Tonic	1.5	Bromides, Valerian.
Bristol's Sarsaparilla	9.27	Iodides, Sarsaparilla.
Warner's Safe Nervine	12.35	
Dr. Hall's Rheumatic Cure	8.64	Iodides, Salicylates, Bitter.
Radway's Sarsaparilla Resolvent	10.51	Iodides.
Dr. Kennedy's Rheumatic and Neuralgia Resolvent	68.39	Juniper and Aconite, Camphor.
Warner's Safe Rheumatic Cure	6.59	Salycilates, Peppermint.
Dr. Clark's Kola Compound	17.30	Iodides.
Kilmer's Swamp Root	4.33	Sugar and Herbs.
Kickapoo Indian Sagwa	2 .32	Carbonates, Herbs.
Dr. Wilson's Herbine Bitters	7.92	Carbonates, Bitter.
Wright's Rheumatic Cure	2.55	Turpentine, Wintergreen, Sugar, Iodides, Aconite.
McCollum's Rheumatic Repellant	24.59	
White's Curative Syrup	5.17	
Lowe's Headache Powders		Acetanelid.
Stearn's Headache Cure		Acetanelid.
Miller's Headache and Grip Powders		Acetanelid.
Hoffman's Harmless Headache Powders		Acetanelid, Sod. Carbonate.

Food Preservatives and the Benzoate Question

In the December, 1909, number of *The Quarterly Bulletin* of the Northwestern University Medical School, Chicago, Professor J. H. Long writes an entertaining article on Food Preservatives and the Benzoate Question. This question is of special interest to us in Canada at the present time, when arrangements are being made in the Canadian Parliament to introduce standards of food, under the Adulteration of Food Act. Benzoate of Sodium is one of the "chemicals" introduced by manufacturers in the preparation of catsups, etc. As the result of objections to its use in foods, experiments were made on a poison squad by the United States Bureau of Chemistry of the Department of Agriculture. The conclusion was reached and published in a bulletin, that the benzoate of sodium is a dangerous substance, capable of producing a long train of ills in those who use it with foods. Protests having been made to the conclusions expressed in this bulletin, the Referee Board of Consulting Scientific Experts at President Roosevelt's request, was appointed by Secretary Wilson to study certain phases of this question, and, in particular, to determine whether or not benzoate of sodium and certain other "chemicals" are in reality injurious to health in the manner in which they are employed in the preparation of foods. The Referee Board, of which President Remsen of Johns Hopkins University is chairman, carried out lengthy experiments on the benzoate question, and, in Report 88 of the United States Department of Agriculture, published conclusions differing decidedly from those advanced by the Bureau of Chemistry. It is contended, in Report 88, that benzoate of sodium is a comparatively mild substance which, when used in the relatively small quantities called for in catsups and several condimental foods, must be harmless. It is also stated that its ultimate behavior and fate is not unlike that of the aromatic principles of cloves and cinnamon, which were formerly used as preservatives of perishable foods, such as apple butter, etc.

Professor Long contends that the use of harmless food preservatives by manufacturers should not be interfered with, as "except for the rich, factory-made foods will become the rule, and progress there, as well as elsewhere, must be admitted and encouraged." This is a reasonable view, and one which will doubtless have weight with the Laboratory of the Inland Revenue at Ottawa.

J. J. C.

State Registration of Nurses

Now that Dominion Registration for the medical profession is coming nearer, and the sanguine expect it any day, it is a good time to think of the advantages which would accrue to the public, the nurses, and the physicians by means of a reasonable and practicable system of Dominion Registration for nurses. There are few Canadian physicians who have ever had cause to complain of our Canadian nurses. There are none better in the world, and not many as good. Difficulties there are in the way of State Registration, of course, as of every other thing; but these can be overcome, and the benefits will more than compensate for any trouble in securing the needed legislation. Now is the time to prepare the way for future action, so that legislation may be well considered and successful.

The Academy of Medicine Doing Good Work

It is quite evident that the Academy of Medicine, through its different officers, is fully alive to the questions of most interest to the profession. About two weeks ago, quite a representative deputation waited upon the Ontario Government, urging the Cabinet to establish a Pasteur Institute in Toronto, arguing that the rapidly increasing number of cases of rabies in this Province demands action along this line. The deputation was promised the usual consideration. The Academy is also watching carefully the proposed bill to incorporate the Osteopaths, something that should be "fought to a finish."

W. A. Y.

The Physician's Library

Physical Examination of Surgical Cases. By E. Stanley Ryerson, M.D., C.M., Demonstrator in Surgery, University of Toronto; Junior Surgeon, Toronto General Hospital and Hospital for Sick Children, Toronto. Toronto: The University Press. 1910.

Dr. Ryerson presents to the profession a most useful little manual, one that will be found particularly handy to hospital house surgeons. There is no doubt that there is frequently too great a lack of system among physicians, and this volume will be of material assistance in this direction, helping its readers to systematize their work in physical examination and cultivate certain methods which must of necessity lead to better results through more correct diagnoses. W. A. Y.

The Treatment of Diseases in Children. By G. A. Sutherland, M.D., F.R.C.P.; Physician to Paddington Green Children's Hospital, etc., etc. Published by Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, London, E.C.

The second impression of this little work has been made imperative by the rapid sale of the first. It is a good little work, not claiming to be a full discursive system, but simply a book on treatment, with the necessary amount of pathology, etiology, diagnosis, etc., touched upon, to make clear the author's reasons for such treatment. It is dogmatic. We like dogmatic treatment when given by a past master of great experience, and certainly Sutherland is that. He is an omnivorous reader, and has any amount of clinical work to treat daily. Out of such experience he writes. We can heartily recommend this work to young practitioners and those needing a short resumè on any ordinary disease of infancy and childhood. The chapter on feeding of infants and children is excellent. The book is very reasonable, and if purchased from the Canada Law Book Company, 32 Toronto Street, may be obtained at a discount of 40 per cent. A. B.

Pulmonary Tuberculosis and Sanatorium Treatment. A record of ten years' observation and work in open-air sanatoria. By C. MUTHU, M.D., M.R.C.S., L.R.C.P. Demy 8vo, pp. xii 201, with 6 illustrations, 10 plates. Price, 3s. 6d. net. London: Bailliere, Tindall & Cox. 1910.

The preface and title tell us that this is intended to record the writer's observations and impressions from ten years' experience in sanatorium work. As such it may be accepted, but it can scarcely be looked upon as a serious contribution which will add to our knowledge, or one which may be accepted as a guide. The author dwells at length upon the importance of the physician in his relation to the patient, and of the value in treatment of hope and cheer, and this is good.

The preface says: "The first part of this book attempts to deal with the scientific aspect" of pulmonary tuberculosis. Your reviewer has no hesitation in saying this is one of the weakest attempts he has ever seen—a crude mixture of metaphor and pathology. Two illustrations should suffice (p. 125): "Cases like the above open up doubts as to whether tuberculosis is primary or secondary to pneumonia, or whether the germs of tubercle bacilli have been developed from pneumococci, which are often present in the tuberculous sputum."

The Physician's Pocket Account Book. By J. J. TAYLOR, M.D. Bound in full leather; 24 pages of practical instructions for physicians; 216 pages of accounts. Price $1 per copy. Published by the Medical Council, 4105 Walnut Street, Philadelphia, Pa.

This book is without a doubt the most complete, and at the same time simple and thoroughly efficient account book that has ever been devised. Furthermore, it is absolutely legal, and can be presented in any court of justice. It does not make use of any hieroglyphics, but everything is entered in plain language, and any judge can understand it.

The book contains 24 pages of business instructions for physicians, which have been found very useful and correct in a long and varied practice, under the headings of "Importance of a due bill," "Fees," "Billing and collecting," "Cautions." "Statute of limitations," "Form for wills," "Dying declara-

tions," "Saving and investing," "Instant treatment of poisoning." etc. It also contains an average fee bill, which has been found to work out correctly in practice.

The book contains 216 pages for accounts, of which, eight pages are devoted to alphabetic index, 146 pages are devoted to regular accounts, 32 pages to short accounts, 24 pages to cash accounts, and eight pages to birth, death and vaccination records.

A Text-Book of Obstetrics. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania; Gynecologist to the Howard, the Orthopædic and the Philadelphia Hospitals, etc. Sixth edition, revised and enlarged, with 847 illustrations, 43 of them in colors. Philadelphia and London: W. B. Saunders Company. 1909.

The present is the sixth edition of Dr. B. C. Hirst's text-book on obstetrics, and is a monument to his ability and his vast experience during the past twelve years of this, his special work. The illustrations are extremely good, the gynecological operations required as the results of labor cases are lucidly described and portrayed. In fact, the entire field of obstetrics, including the new-born infant, its care and its diseases, is so carefully and minutely lectured upon and fully covered that it stamps the author a master of the subject. As a reference for the general practitioner and a text-book for students it is difficult to conceive of a work more reliable. C. F. M.

Principles of Hygiene. For Students, Physicians and Health Officers. The New (3rd) Edition. By D. H. BERGEY, M.D., Assistant Professor of Bacteriology, University of Pennsylvania. Octavo of 555 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1909. Cloth, $3.00 net. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

In looking through this volume one notes the usual subjects dealt with in such a work, but dwells with especial interest on what the author writes in respect to the newer ideas on sewage purification, the diseases produced by vitiated air, and the removal of dust therefrom. The subject of immunity and the use of vaccines will also attract the reader, the chapter on immunity having been completely rewritten. "The Mental Atti-

tude," in the chapter on Personal Hygiene, is apropos in these days of psychotherapy; "The Influence of the Working Day on the Health of the Laborer" shows the trend of the times sociologically. The important subject of disinfection is fully dealt with. We are pleased to notice that the author has given stress to the milk question.

The book is well illustrated, the typography is excellent, and the style lucid. We commend it. J. N. E. B.

A Manual of Midwifery. For Students and Practitioners. By Henry Jellett, B.A., M.D. (Dub. Univ.), F.R.C.P.I., L.M.; King's Professor of Midwifery in the School of Physic, Trinity College, Dublin; Gynecologist to Sir Patrick Dun's Hospital; President of Obstetrical Section of the Royal Academy of Medicine in Ireland; Late Gynecologist and Obstetric Physician to Dr. Stevens' Hospital, Dublin; ex-Assistant Master Rotunda Hospital; Late Extern. Examiner in Midwifery, Royal University of Ireland; Late Censor and Examiner in Midwifery, Royal College of Physicians, Ireland; Late University Examiner in Midwifery and Gynecology, Dublin University; Late Vice-President of the British Gynecological Society. With the assistance in special subjects of: W. R. Dawson, M.D., F.R.C.P.I., Medical Superintendent, Farnham House, Dublin; University Examiner in Forensic Medicine, Dublin University. H. C. Drury, M.D., F.R.C.P.I., Physician to Sir Patrick Dun's Hospital, and formerly Physician to Cork Street Fever Hospital, Dublin. T. G. Moorehead, M.D., F.R.C.P.I., Physician to the Royal City of Dublin Hospital; Late Chief Demonstrator in Anatomy, School of Physic, Trinity College, Dublin. R. G. Powlette, M.D., Pathologist to the Rotunda Hospital and to Dr. Stevens' Hospital, Dublin; Lecturer on Pathology, Queen's College, Galway. Second Edition. With 17 plates and 557 illustrations in the text. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1910. Size Demy 8vo. Number of pages xiv.+1210. Illustrations 557. 17 plates. Price 21s. net.

This work is divided into ten chief parts: Obstetrical Anatomy—Maternal and Ovular; Obstetrical Asepsis and Anti-

sepsis; the Obstetrical Armamentarium, Obstetrical Diagnosis; the Physiology of Pregnancy; the Physiology of Labor; the Physiology of the Puerperium; the Pathology of Pregnancy; the Pathology of Labor; the Pathology of the Puerperium; Obstetrical Operations; the Infant.

The author favors the use of boiled rubber gloves by obstetricians, instead of trusting to the use of antiseptic applications to the hands. As lubricants, he recommends soap, corrosive vaseline, or a 1 per cent. solution of lysol. In making the diagnosis of pregnancy, and while assisting at labor, he advises obstetricians to depend on abdominal palpation in place of vaginal examinations.

The last chapter, "The Infant," is a fitting ending to a very well-planned, admirably written work on obstetrics. The book, which is well printed, is convenient in size. The 17 plates and 557 illustrations add distinctly to its value. J. J. C.

Attention is called to the announcement of the Canada Law Book Company, of this city, appearing on page xlvi. of this issue. This firm are offering a number of the latest books from the Oxford Press, at a most attractive discount, their reason for so doing being that they are giving up their medical book department. It would seem to be the chance of a lifetime. The books include: "Diseases of the Larynx," by Harold Barwell, M.B (Lond.), F.R.C.S. (Eng.). "Treatment of Diseases in Children." by G. A. Sutherland, M.D., F.R.C.P. "Surgical Emergencies," by Percy Sargent, M.B. (Cantab.), F.R.C.S. (Eng.). "Skin Affections in Childhood," by H. G. Adamson, M.D., M.R.C.P. "Heart Disease, including Thoracic Aneurism," by F. J. Poynton, M.D., F.R.C.P. "Practical Anesthetics," by H. Edmund G. Boyle, M.R.C.S. "Diseases of the Male Generative Organs," by Edred M. Corner, M.C. (Cantab.), F.R.C.S. "Diseases of the Ear," by Hunter Tod, M.B., F.R.C.S. "Diseases of the Nose and Throat," by E. B. Waggett, M.B. (Cambridge). "Auscultation and Percussion, with the other methods of Physical Examination of the Chest," by Samuel Jones Gee, M.D., F.R.C.P. "Medical Lectures and Clinical Aphorisms," by Samuel Gee, M.D., F.R.C.P. "Clinical Lectures and Addresses on Surgery," by C. B. Lockwood. "A Manual of Venereal Disease," by Officers of the Royal

Army Medical Corps. "Functional Nervous Disorders in Childhood," by Leonard Guthrie, M.D., F.R.C.P. "Operations of General Practice," by Edred M. Corner, M.C. (Cantab.), F.R.C.S. "Enlargement of the Prostate," by Cuthbert Wallace, M.S., F.R.C.S. "Cancer of the Womb: its Symptoms, Diagnosis, Prognosis, and Treatment," by Frederic J. McCann, M.D. (Edin.). As these books are bound to go quickly, our readers had better phone Main 346, in order to secure what they need.

The Skin Affections of Childhood. With special reference to those of more common occurrence, and their diagnosis and treatment. By H. G. ADAMSON, M.D., Lond., M.R.C.P. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E.C.

This book fills a recognized want, for there is no doubt that the skin diseases of childhood have been sadly neglected, except in the large books of references.

The system adopted is clear and readily grasped, so that diseases which were formerly obscure are made much more readily understood.

The formulæ given at the end of the book are most valuable. Evidently the author has admitted purposely many that are of uncertain value, so that the ones mentioned are all the more valuable.

This book can be procured from The Canada Law Book Company, Toronto, at a discount of 40%. D. V. S.

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume III., the Eye, Ear. Nose and Throat. Edited by CASEY A. WOOD, C.M., M.D., D.C.L.; ALBERT H. ANDREWS, M.D.; GUSTAVUS P. HEAD, M.D. Series 1909. Chicago: The Year Book Publishers, 40 Dearborn St.

It has been a pleasure to read this work, which one now comes to look forward to each year as embodying all the good things that have been introduced during the preceding year. An im-

mense amount of material has been gone over, and we congratulate the authors on selecting such a practical amount of interesting and valuable reading matter. On looking over it, one would be surprised to see the number of details that he has missed, even though he has tried to keep up his reading.

P. G. G.

We have at hand a copy of Dr. J. J. Taylor's *Physician's Pocket Account Book and Practical Advice for Professional Success,* published by the Medical Council, 4105 Walnut St., Philadelphia, Pa.

This pocket book contains a simple, yet nicely arranged, account system for physicians, also some suggestions on the collection of accounts. Valuable information in condensed form is also given on the Form of Wills, Dying Declarations, Treatment of Poisoning, Infectious Diseases, Weights and Measures, and an outline of the average fee charged in medical, surgical and obstetrical practice. N. K. W.

A Text-Book on the Practice of Gynecology. For Practitioners and Students. By W. EASTERLY ASHTON, M.D., LL.D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Fourth Edition; thoroughly revised. Octavo of 1,099 pages, with 1,058 original line drawings. Philadelphia and London: W. B. Saunders Company. 1909. Cloth, $6.50 net; half-morocco, $8.00 net. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Ashton's Text-Book on the Practice of Gynecology now appears in its fourth edition, and covers about eleven hundred pages in all. The book is divided into forty-five chapters, devoted to Gynecology in its different aspects. Dr. Ashton states in his preface that a work on this subject should aim at taking nothing for granted in describing gynecologic diseases. He believes in not only stating what should be done in every case, but in this work gives directions and illustrations sufficiently explicit that any reader can follow. There is no doubt that the author is correct in his statement along this line, and that if a volume on any subject is to be acceptable to the profession it ought to be as original as possible, there being too great a tendency on the part of writers to rehash what others have already stated.

Dr. Ashton in this book presents to his readers both the medical and surgical aspects of his subject, and it can be safely said that the result is eminently satisfactory. He has given to the medical profession a book that can for many years to come be considered to occupy the foreground in gynecologic science.

Practical Anesthetics. By H. EDMUND G. BOYLE, M.R.C.S., and L.R.C.P.; Assistant Anesthetist to St. Bartholomew's Hospital; Demonstrator of Anesthetics to the Medical School of St. Bartholomew's Hospital; Late Senior Honorary Anesthetist to the Paddington Green Children's Hospital; Senior and Junior Resident Administrator of Anesthetics at St. Bartholomew's Hospital.

The title of this book is well borne out by its contents. It is eminently practical. It contains 169 pages of reading matter, all of which are full of valuable suggestions, not only to the student, but to the general practitioner. Few books express as clearly and concisely as this one the exact conditions an experienced anesthetist meets in his daily work.

The illustrations of different positions of patients in various operations are exceedingly valuable. This book can be obtained from The Canada Law Book Company, 32-34 Toronto Street, Toronto, at 40% discount. S. J.

A Manual of Normal Histology and Organography. By CHARLES HILL, Ph.D., M.D. Published by W. B. Saunders Company, Philadelphia and London.

As the author states in the preface, this book is essentially for elementary students. It covers the whole subject of human histology in an interesting, readable manner, well suited to the requirements of students who do not need great detail. The text is accompanied by good illustrations, mostly from well-known authors, in which the descriptive matter is printed directly on the plate, allowing of much more rapid association of the illustration with the text. The chapter on the teeth is very full, and shows clearly the practical application of the study of histology to operative dentistry. The book will probably be extensively used by medical and dental students. G. S.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXVII. TORONTO, APRIL, 1910 No. 4

Original Contributions

TREATMENT OF HERNIA IN CHILDREN

BY CHAS. B. SHUTTLEWORTH, M.D., C.M., F.R.C.S. (ENG.),
Assistant Surgeon Toronto General and Sick Children's Hospital.

The treatment of any given disease or deformity naturally falls into two divisions, the radical and the palliative. In the former condition the parts may be restored to their normal structure and functional activity, and in the latter class, on account of organic changes or existing intrinsic conditions, a restoration to the normal state is out of the question; our efforts are then directed to secure the greatest medium of comfort by using means to prevent physical disability. Hence, we see that to intelligently direct measures for the relief or cure of hernia it is essential that we should have a correct knowledge of the natural or clinical history of the condition and its causation. For without this data it is possible to misdirect our efforts to establish a cure by instituting some surgical procedure for the cure of a protrusion which if left to itself might possibly disappear.

It is a well known fact that infantile herniæ have a tendency to disappear of themselves in a large percentage of cases as shown by the statistics collected by Malgaigne, sixty years ago. He pointed out that there is one hernia in every twenty-one children during the first year of life, and that this proportion remains the same up to the sixth year of life, when a decrease occurs, so that

at the age of thirteen the ratio is one hernia in seventy-seven children. From this age to twenty-one, there is a rapid increase among males so that there is now one hernia in thirty-two, due, no doubt, to the fact that during these years boys learn their trades, indulge in rough athletic sports and over-exert themselves. In females the increase in the proportion of hernia does not take place until the child-bearing period when there is a great increase in the number.

It follows from this that without surgical treatment 75 per cent. of all herniæ heal spontaneously before the child has reached 12 or 13 years, even if no herniæ formed during the period between the ages of 6 and 13, which, of course, we all know is not the case. Bull and Coley's records show that out of over 15,000 adults with hernia, less than 5 per cent. have been ruptured since childhood. Hence it follows that much more than 75 per cent. of all herniæ in children will heal spontaneously, or at least without surgical treatment, if proper conditions are secured.

In a paper written by T. C. Martin he shows that during the development of the child certain changes take place which tend to a natural cure of hernia. He points out that in the enlargement of the pelvis, the parietal peritoneum increases at the expense of the mesentery; the latter is thus shortened, and so prevents the entrance of the intestine into the inguinal or crural canals. A displacement of the internal abdominal ring and the widening of the emunctory canals also help in curing the rupture. A faulty development of the abdominal walls and the natural defect resulting from the descent of the testicles in the male, particularly when the processus vaginalis remains patent, must be considered most potent predisposing causes in the formation of herniæ. Macready places this hereditary tendency or defect in 25 per cent., and Malgaigne in 33 per cent of all cases.

Beside anatomic reasons for the prevalence of hernia in children, Eccles, Langton, Ochsner and others have pointed out that the factor of increased intra-abdominal pressure is a most important cause. This may be due to habitual constipation, requiring great straining during defecation; primosis, causing strain during micturition; severe coughing. and lastly, intestinal disturbances from unsuitable food, resulting in flatulency and

indigestion, which, in turn causes pain and crying, and a constant rise in the intra-abdominal pressure.

The habit of applying a tight abdominal binder during infancy no doubt predisposes the child to the formation of a hernia, even if it is not actually responsible for the condition. This binder serves no useful purpose, except during the separation of the cord and the practice should be discontinued.

Congenital inguinal, or femoral hernia, in females is rare, though the umbilical variety is common, and is readily cured in both sexes by simple means. A retentive apparatus in the female is only necessary when the hernia becomes rapidly larger or is painful. There is a singular tendency in female babies to the escape of the pelvic organs of generation through the canal of nuck. Strangulation is very rare in infancy or young children.

A truss on a diapered infant is a great nuisance, is continually soiled, difficult to keep clean and, if not perfectly fitting, is a source of misery to the little patient.

Oehsner has shown that a large percentage of herniæ in children will heal spontaneously if the increased intra-abdominal pressure is relieved. This is accomplished by means of trusses, or better and more rapidly by placing the child in bed with the lower end elevated to an angle of 20 or 30 degrees with the floor, the time usually required not exceeding six weeks. The mother must not carry the child but nurse it by leaning over the child's crib, or at least place it back in bed in its inverted position as soon as fed. Coughs, constipation and phimosis should be cured, and by the administration of a suitable diet, given at regular intervals, gaseous distension of the bowels and increased abdominal pressure are avoided.

All herniated children should be kept on their backs or buttocks as long as possible. The prone position or sitting posture is most favorable to recovery. The creeping posture distributes abdominal pressure, and so relieves tension on the herniated region, and promotes a cure. The child should not be allowed to walk for this brings the weight of the superincumbent abdominal viscera on the weakened areas.

Among the poor, the writer has had ample opportunity of judging from an extensive experience gained at the out-patient department of the Hospital for Sick Children, Toronto, the treatment of infantile hernia is very unsatisfactory. It is almost im-

possible to have the parents carry out the instructions given and particularly when a truss is advised. All forms of retentive apparatus, fitted with every care have been tried, but with very indifferent results. It is practically impossible to treat the large numbers of these patients by the rest cure in the hospital on account of limited accommodation. In private practice, the results have been very satisfactory indeed. If a properly fitting truss which perfectly controls the protrusion, be worn night and day, for at least six months, and precautions taken to guard against increased intra-abdominal pressure from any cause whatever, the prospects of cure, in infants, are good.

Operation is indicated only in strangulated hernia, in irreducible hernia and in very large hernia which a truss will not hold. In the two former classes all that is necessary is the operation devised by Mitchell Banks which consists in simply dissecting out the sac, ligating it, and allowing the stump of the sac to return within the abdominal cavity and closing the wound in the skin. In large herniæ, one of the classical and well-tested procedures, such as Bassini's, should be adopted.

I have not attempted in this short paper to cover the broad subject of hernia, but simply to present, in a very imperfect manner, the general principles underlying the treatment of a condition which is so prevalent in children, and which if left too long untreated may cause much misery, and in time often difficult to cure.

478 Huron Street, Toronto.

Canadian Journal of Medicine and Surgery

Editor:

J. J. Cassidy, M.D.

45 Bloor St. E., Toronto

Managing Editor:

W. A. Young, M.D., L.R.C.P., Lond.

145 College St., Toronto

Surgery:

F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; Surgeon, Hospital for Sick Children, Toronto; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital.

Clinical Surgery:

Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopædic Surgery:

B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Physiology:

A. B. Eadie, M.D., Toronto.

Medical Jurisprudence and Toxicology:

Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:

Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:

A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:

Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto, Editor, The Canadian Nurse.

Dermatology:

D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Medicine:

J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:

Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:

J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:

N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meters, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:

Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:

W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:

J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:

Percy G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

THE WINTER MARCH OF THE ROYAL CANADIAN HORSE ARTILLERY

A BRIEF notice of the winter march of the Royal Canadian Horse Artillery will be of interest to our readers, from the standpoint of military hygiene. The route march detachment consisted of 150 men, 140 horses, 4 twelve-pounder guns, 6 eighteen-pounder Maxim guns, 7 teams, and 1 ambulance. About twenty-five of the mounted men carried snow-shoes strapped to their backs, to be used in the North country where the snow was deep. The men wore fur caps and buckskin gloves. Every man and officer wore "beef" moccasins. The guns were mounted on bob-sleighs and skids, so that both could be thoroughly tested. The ammunition (300 rounds) was carried in the boxes of the limbers, no special sleigh being used for the purpose.

The march began at the artillery barracks, Kingston, Ontario, at 9 a.m., February 15th, 1910, and when the detachment was about twelve miles out from the city, both batteries went into action in the broken country lying between the inland lakes and the Rideau Canal. The roads traversed by the batteries were, in many places, covered with deep drifts of snow, and the haulage was heavy. At noon the detachment had a good cold lunch by the wayside. Neither liquors nor beer were served, the fluids con-



ROYAL CANADIAN HORSE ARTILLERY IN WINTER CAMP.

sisting of hot tea and coffee. As the country passed through was under local option, alcohol could not be obtained. At 1 p.m. the march was resumed, and continued until the detachment arrived at Murvale, where a camp was prepared and a hot meal served. The horses, which were double-blanketed, were picketed along a fringe of wood, where they were sheltered from the wind. No tents were used by the men; each man received five blankets and two rubber sheets, and the men slept in these. A good many preferred to spend the night by the camp-fires, singing songs and exchanging yarns with each other. The fires were kept burning all night. During the night, rain, hail and sleet fell freely for hours, and the wind blew a hurricane.

After a breakfast of tea, coffee, bread, with boiled ham and bacon, the march was resumed at 9 a.m., February 16th, the detachment going north in pursuit of the imaginary enemy they had compelled to retire from the neighborhood of Kingston. A hot meal was served at noon. A camp was made at Verona and supper was served. Verona is about twenty miles from Kingston in a northerly direction. All stood the march well, and no sick were reported at the Medical Officer's parade. About 8 p.m. the temperature at Verona was near zero, with moisture in the air. No tents were used at night.

On the following day, February 17th, after breakfast, the detachment marched to 14 Islands Lake, in order to perform certain manœuvres in attacking a guerilla force. At 3 p.m. dinner was taken. After

supper the night was spent in camp, at Verona, without tents. Neither man nor horse was reported the worse for roughing it, although the night was very stormy. About 8 p.m., snow began to fall, and the camp-fires were gradually extinguished. Snow fell and the wind blew till the small hours. The men were buried beneath the snow, and, on rising at *reveille,* at 6.30 a.m., they looked like spectres, until they threw off their snow-covered blankets.

At 9 a.m., after breakfast had been taken, the detachment began a forced march back to Kingston. Reaching Murvale at noon, the detachment halted for lunch and to rest the men and horses. The haulage was heavy, as the snow lay deep on the road. At 1 p.m., the march was resumed, and the detachment reached Kingston about 4 p.m. Every man was in the pink of condition, and the horses showed no signs of having passed through one of the hardest trials ever imposed on any mounted corps in Canada.

Inside of an hour after arriving at the artillery barracks, Kingston, every transport team was unloaded, the guns were stored, and all material used on the march replaced in the Quartermaster's stores. Although the men of the detachment were all young, hearty, well-drilled artillerymen, still it must be acknowledged that the tests they endured were unusually severe. They stood the tests well, thus proving that, with picked men, well fed and well clad, campaigning can be carried on in Canada during winter. The ability of the men to sleep in the open in wintry weather, when, during one night, the tempera-

ture sank to near zero, and, on another night, a heavy snowstorm extinguished the camp-fires, is also worthy of note. Alcohol was not used at all, and is evidently not necessary to keep soldiers in good condition, even when they are exposed to great fatigues.

J. J. C.

ARE FOMITES PRODUCTIVE OF CONTAGIOUS DISEASES

PRACTICAL sanitarians pay great attention to woollen or cotton goods, or mixtures of the same, feathers, etc., and to the walls of sick-rooms, as possible sources of infection, and they spend time and material in disinfecting them, because they think that contagion sticks to them for a long period, and may be transmitted by them to the well. In most instances, however, experience teaches that contagion comes directly from an infected man or an infected animal, and not through their belongings, in an indirect manner, after a considerable interval. Although the poison of smallpox may survive for a short time on clothing, yet it dies in time and ceases to propagate that disease. Hence it is probable, that cases of smallpox formerly supposed to have been contracted from infected clothing, long after convalescence, were really instances of infection from newly-imported cases of that disease. Vaccinated physicians, who attend smallpox cases, do not communicate that disease to their families or friends; so that vaccinated contacts may be considered harmless.

In scarlet fever a similar argument does not apply, because there is no vaccinal protection against scarlet fever, and contacts cannot be deemed safe, unless they have already had the disease. Fomites may, however, be blamed for spreading scarlet fever in instances in which the real sources of contagion were unrecognized infected persons. Scarlet fever without a rash, though well known to medical science, may confront a practitioner and yet pass unrecognized, spreading scarlet fever among unsuspecting persons.

Besides, the contagium of scarlet fever is unknown. If it were known, its life history, communicability to fomites, length of period during which its activity might persist, could be tested in the laboratory and settled, instead of allowing sanitarians to trust to conjecture on these points. A similar line of argument applies to the contagium of measles, to that of varicella, or to that of mumps, all of which are as yet unknown. The contagium of diphtheria is communicated directly from the sick or convalescents to the well, as the bacilli of diphtheria do not live long on dried surfaces, such as the walls of sick rooms.

Until it was shown by actual experiment that yellow fever is caused by the bites of stegomyia fasciata, contagion was believed to emanate from the bodies of yellow fever patients; and their bedclothing, clothes and the rooms they occupied during an attack were believed to be contagious. Since the crucial experiments of Drs. Reed, Carroll, Lanear and Agramonte, were made in Cuba, it has been

demonstrated that fomites reeking with the vomit, urine and feces of yellow fever patients have nothing whatever to do with transmitting the contagion of that disease.

One need not go so far as to say that, in the transmission of scarlet fever, measles, varicella and mumps, fomites have no active part. It is largely a question of evidence, and the fomites theory is on trial. The discovery of the true vehicle of a contagious disease dispels doubt, because it shows whether contagion is communicated directly from the sick or convalescent to the well, or indirectly through fomites. J. J. C.

THE GALVANO-CAUTERY IN THE TREATMENT OF MALIGNANT GROWTHS

Referring to the effects of the galvano-cautery in preventing the return of cell growth in uterine carcinoma, John Byrne, of Brooklyn, who had operated with the electric cautery in 367 cases of carcinoma uteri, stated, " that there is hardly any doubt that the developmental activity of the cancer cells or germs, in certain stages, or under certain conditions, may be arrested or permanently destroyed by a degree of heat much below that which is detrimental to, if not destructive of, normal tissue." He believed that the thermal agent exerts a modifying influence much deeper than the surface actually cauterized. He said, further, "I have never known

an instance of relapse in which the disease had returned to the part from which it had originally been excised, or very close to the cauterized surface from which the cervix uteri had been removed by the galvano-cautery." If this observation proves correct, as is very likely to be the case, for the experience of several recent writers confirms it, then the value of the electric cautery over any cutting operation yet devised, without the aid of heat, must be apparent.

In the great majority of cases of hysterectomy done for carcinoma, in which the knife is used, recurrence takes place in the parametric tissues, extending to and invading the bladder and rectum. When the galvano-cautery is used in removing a carcinoma uteri, every portion of tissue surrounding the uterus, and near to it, is subjected to intense heat, which seals up the lymph spaces, and the influence of the heat is extended to the parametric tissues. Dr. Gillette, of Toledo, who discusses the use of the electric cautery in carcinoma uteri (*New York Medical Journal,* Jan. 1, 1910), says, " In my experience, the recovery is usually prompt and the mortality low, the pain and shock being surprisingly little. I am fully convinced that the cautery exerts a most beneficent influence over cancer of the uterus, an influence other than any which can be obtained with the knife alone."

In the January, 1910, number of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY, Dr. J. Price Brown, of Toronto, published a paper dealing with

the treatment of sarcoma of the nose by the electro-cautery. He had treated seven cases successfully by this method. The main contention held by the author of the paper was, that, although sarcoma of the nose is a very malignant disease, and may recur after removal by electro-cautery, yet, by persistent effort, the control being retained by the surgeon, and the cauterizations being repeated, as required, the disease can be eventually conquered and the tendency to return eradicated.

The author says: "Three out of the seven have permanently recovered—that is, after intervals of fourteen, seven, and two and three-quarter years there has been no return. The fourth died from toxemic poisoning. The fifth has had no return in seven months, the sixth no return in the last two months, the seventh no return in the last two months —that is, out of the first four cases, there was a recovery of 75 per cent., and a death-rate of 25 per cent. We may consider the last three too recent to be reported upon positively as cures."

Dr. J. Price Brown's explanation of the modus operandi of the electro-cautery in preventing recurrence of malignant growth is as follows: Sarcoma of the nose is an intensely hemorrhagic disease. The blood vessels and blood spaces contained therein possess no contractile power. Hence, when cut by knife or cautery, they bleed profusely at once. The heat of the electric knife, however, coagulates the fibrin in the adjacent external tissues and stops the bleeding, putting an end to exosmose and endosmose,

so that, while checking the flow of blood, it also checks the absorption of cell life, and is a strong barrier against the local extension of the disease."

Thus, the modus operandi of the electro-cautery in checking hemorrhage from severed living tissues offers a working basis to explain the reason why malignant growths, which have been removed by the electro-cautery, rarely if ever grow again in tissues adjacent to the site of the primary growth.

J. J. C.

HOW LONG WILL IT BE BEFORE THE COLLEGE OF PHYSICIANS AND SURGEONS IS BANKRUPT?

THE Ontario Medical Council has for some months past been the subject of a great deal of criticism on the part of, not only the Profession itself, but the Medical Press throughout the Province. There are some, no doubt, who feel that this criticism is not altogether deserved, whereas others are of a different opinion. It should be distinctly understood, however, that the Profession are not objecting to the Council as an institution, as the Council has unquestionably done the most valuable kind of work for the Medical Profession ever since its inception, it having upheld the status of the Profession in every way. *It is not to the Council as a corporate body that objection is being taken, but to its methods of doing business.*

Some correspondence appears on pages 238 and 239 of this issue of the Journal, which will no doubt

interest our readers. The writer, thinking that every member of the college in good standing had access to the books of the college, wrote first to the Treasurer and then to the President asking for permission to verify certain statements that had been made regarding the Council's expenditures. As will be noticed, refusal was given in each instance to the request made. Why is this the case? What have the Council to conceal? Are they afraid of any disclosures that might be made? Would it not be very much better to grant access to the books and by that means, perhaps, save further criticism?

The following facts regarding the business methods of the College of Physicians and Surgeons certainly make interesting reading, and, were the same facts applicable to any business concern, it would be a very short time before the services of an official assignee would have to be called in. In 1905 the Medical Council had a cash balance of $62,580.56, which during the year 1906 grew to $66,161.44. In 1907 the college purchased their new building on University Avenue, reducing their balance to $48,-359.41. In 1908 we find that their balance fell to $44,745.17. We fear very much that when the statement of 1909 appears this balance will be still further reduced.

The expenses of the Council seem to *have steadily increased out of all proportion to the increase in its income.* During the years 1906-1907, the income amounted to $25,577.69, and the expenditure to $21,997.11.

In 1907-1908 the income amounted to $25,790.58 and the expenditure to $25,538.86, in other words, *the Council expended within* $251.72 *of its income,* in addition to the sum of $18,053.78 spent for its new building.

In 1908-1909 the income of the Council amounted to $27,748.77 and the expenditure to $31,363.01. During this year *the Council spent* $3,614.24 *more than its income.*

It will at once be seen that *the net profit* of $3,580.58 in 1906-1907 *was changed* in two short years *to a loss* of $3,614.24.

There is but one ending to this state of affairs and that is bankruptcy. The members of the Council in 1906-1907 drew for Council and Committee meetings the sum of $4,322.50, in 1907-1908 $5,953.95 and in 1908-1909 $8,782.10. Why, may we ask, should this more than double in two years? It is little wonder that Dr. J. A. Temple said regarding this (vide Annual Announcement, 1909-1910, page 322), "We should try and save and show to the public in general and our Profession that we are not grafters."

We think that it is but due the Profession that a full and *detailed* statement of the Council's financial dealings be furnished to each and every member of the college. It seems to us that there is something seriously wrong, and the sooner the present state of affairs is put to right the better.

W. A. Y.

THE RABIES OUTBREAK

THE subject of Rabies has been uppermost in the minds of the Medical Profession of Canada for some little time past. The recent enactment as to the compulsory muzzling of dogs has been the cause of a good deal of caustic correspondence and criticism in the lay press, many people considering that the law was entirely uncalled for, as the majority of the cases of so-called Rabies on human beings were more hysterical than otherwise. Others claimed that the muzzling of canine pets was nothing short of inhuman. That the former argument is however incorrect is proven by the correspondence to be found in this issue from Veterinary Director General J. G. Rutherford, of the Department of Agriculture, Ottawa, and Dr. Chas. Hodgetts, Chief Medical Officer of Ontario. These gentlemen are in a position to speak on this subject, having data that cannot be questioned, as far as Rabies in Canada is concerned.

We had the privilege of reading recently an abstract of an article by Dr. Langdon Frothingham of the Department of Bacteriology in Harvard Medical School. In the article, the author discusses the history, prevalence and prevention of rabies and its relation to animal experimentation. The article is a strong argument in favor of the muzzling of dogs, and valuable statistics are given to show the effect of muzzling orders in eradicating the disease. Since the introduction of proper dog laws and compulsory

muzzling, Dr. Frothingham says, the disease has greatly diminished in most of the German states, a yearly average of about 700 rabid animals being reported from 1866 to 1902, usually near the border line of countries where muzzling is not enforced. With such laws, Denmark, Sweden and Norway have not known rabies for more than 50 years, and it has recently been eradicated from England and Switzerland. It has never been known in Australia, probably owing to the strict enforcement of a six months' quarantine for dogs.

Statistics are given of several outbreaks of the disease in the United States. Between 1876 and 1882 in Massachusetts, 44 people died of hydrophobia, and between 1888 and 1894, 45 people died. From 1895, when the Pasteur treatment was introduced, the number of well authenticated cases of rabies with the number of persons treated shows surprising results:

	Mortality dogs.	Mortality People.	People exposed and given treatment.
1895	4	0	11
1896	12	2	7
1897	19	0	8
1898	25	2	11
1905	98	2	12
1906	356	8	133
1907	741	2	165
1908	511	5	144

The preventive treatment has reduced the mortality of persons bitten by rabid animals from be-

tween 6 and 14 per cent. to a fraction of one per cent. Pasteur institutes, says Dr. Frothingham, will cease to exist as soon as properly enforced dog laws eradicate rabies, for no infectious disease can so easily be eradicated. At the Tunis Institute in 1906, 489 persons were treated with no deaths. At the University of Bucharest, in 1903-5, 3,091 were treated and none died. In 1905 there were treated in forty Pasteur institutes 104,347 people, of whom 560 died of rabies later than 14 days after treatment ended. According to the location of the bite, head or hands, the mortality of the treated varies from 1.99 to 0.36.

In Canada, during the twelve months ending February 28th, 1910, "234 dogs were placed in quarantine and *in* 41 *additional cases rabies was definitely diagnosed,* in 38 of them by animal inoculation" at the Biological Laboratory of the Department of Agriculture at Ottawa.

For the past few months the Province of Ontario has been very much upset by the apparent increase in rabies, more so among cattle and dogs than among human beings; and, sad to relate, there has been at least one case of hydrophobia, namely, that of a child in Hamilton. At that time there was not a branch of the Pasteur Institute in Canada, where patients bitten by animals suspected of having rabies could be treated. It was necessary to send these patients to New York to undergo a system of treatment. Needless to say, this incurred a much greater expense than most people could afford.

The Hon. W. J. Hanna, Provincial Secretary, as

member of the Cabinet in charge of the Public Health of the Province, placed in the supplementary estimates for 1910, the sum of $1,000, for the specific purpose of providing for the antirabic and antimeningitic treatments, and thus had anticipated the representations of the Academy of Medicine of Toronto. In respect to the Pasteur treatment, and in view of this financial provision, arrangements were made by the Minister, for the administration of the treatment, two special clinics being established, one in the Toronto General Hospital and the other in Sick Children's Hospital, by the courtesy of the governing Boards, where the treatment is administered daily by the Medical Staff of the Provincial Board of Health. The charge for the treatment in each case is $25.00, being the amount paid by the Department for the vaccine in New York.

To date (9th of March), there are about twenty persons receiving daily inoculations of this serum, and, so far, we are pleased to say, none have shown any symptoms of rabies. The process of inoculation is simple. The skin is cleansed as for a hypodermic injection, and the inoculation made into the subcutaneous tissues of the abdomen and subsequently sealed with absorbent and collodion.

On the first three or four days, the patient is given two injections, each containing three cubic centimetres of the serum, and this is followed for three weeks with one injection of three or two and a half cubic centimetres each day. So far, none of those inoculated have manifested any inconvenience from

this inoculation, which, in itself, amounts to very little, but whose results are so very beneficial.

As Dr. Hodgetts states, "The disease does exist in animals, and during the past two years evidence has been gradually accumulating, which clearly indicates that rabies has been spreading in that portion of Ontario now covered by the rabies regulation." It will be at once seen, therefore, that the outcry as to this terrible disease, as regards animals, "is no myth or hysteria," and, "looking at the question from a public health standpoint, it is not one as to whether we have rabies in the human being, but with the knowledge that it is in the animal kingdom and can be communicated to the human being, as a wise step in preventive medicine, the muzzling order is most essential." W. A. Y.

THE DOWNEY TUBERCULOSIS BILL

This Bill came up once again for discussion in the Ontario Legislature a few weeks ago, and a considerable part of one afternoon was spent in going over its clauses. As the profession are aware, Mr. Downey's Bill aims at dealing with the proper care of tubercular cases. In his address before the House, Mr. Downey claimed that nearly twenty-seven hundred people died in the Province of Ontario during last year from the White Plague. His Bill, he said, provided for the compulsory notification by the attending physician, and also the sending of printed instructions from the Provincial Board of

Health as to the best method of treatment. Mr. Downey added that this notification was intended to be quite confidential; that there would be no placarding, and therefore no publicity. He said that there was no provision at present in law for the removal of indigent tubercular patients by Boards of Health. Several of the medical members of the House spoke on the Bill, expressing approval of its main ideas, though differing somewhat in details. Mr. R. R. Gamey declared, from the experience he had had in his own family, that he did not believe that the people would object to compulsory notification, or any other means having a tendency to ameliorate conditions, and claimed that the Province should even go further than the Bill provided. Dr. Godfrey, member for West York, said that he considered that, in view of the different opinions held upon this subject, a very careful investigation should be made of the entire subject before the Bill was finally passed. Sir James Whitney, however, put both feet down upon the Bill in toto. He took the stand that no patient should be taken from his own doctor who diagnosed the case and "given over to a bunch of printed matter." Sir James said, most emphatically, that he would just as soon trust the ordinary physician to deal with a case of tuberculosis as any specialist he knew of, and he went on to say that he did not propose to make it possible for any poor man's home to be broken into under the pretext of benefit to the community at large. The Bill, therefore, received a hoist.

W. A. Y.

AMENDMENTS TO THE ONTARIO MEDICAL ACT, PROPOSED BY THE ACADEMY OF MEDICINE

DR. J. S. HART, representative for West Toronto on The Ontario Medical Council, called a special meeting of the Profession at The Academy of Medicine, Queen's Park, Toronto, on March 2nd to consider certain recommendations to be made to the Ontario Legislature regarding Council matters. The meeting was fairly well attended, those present taking quite an active part in the discussions. The following recommendations were passed to be duly presented to the Cabinet of the Ontario Government:

(1) That the Legislature of Ontario pass the necessary law preventing those colleges who are not now actively engaged in Medical Teaching having any representation in the Medical Council, the colleges specially referred to being The Regiopolis (Kingston), Trinity Medical College, Trinity College and Victoria College.

(2) That the total representation of the Council should be reduced to the colleges now actively engaged in medical teaching, three in all, two Homeopaths and nine Territorial representatives, reducing the total number of members of the Council to fourteen.

(3) That the Medical Council be requested to furnish every member each year with a detailed financial statement of their affairs.

At the date of writing (March 16th), it is under-

stood that the Ontario Government, it is said at the instigation of the University of Toronto, will not act upon any of the above recommendations for the current session. They have decided, however, to give the Executive of the Medical Council the necessary power to erase from membership the name of any Medical Practitioner who is found to be guilty of unprofessional conduct in a criminal sense. Why Sir James Whitney should ignore the recommendations as made by the Academy of Medicine is quite incomprehensible. It has been shown beyond question that certain colleges, at present represented on the Council, have no right under the Act to such representation. We trust that the Legislature will undoubtedly take further steps in this connection next Session.

W. A. Y.

EDITORIAL NOTES

Dean Clarke Complains of the Teaching and Organization in Some Departments of the Faculty of Medicine of the University of Toronto.

An extract from the Report of Dean Clarke, which appears on page 21 of the Report of the Board of Governors of the University of Toronto, for the year ending 30th June, 1909, contains an attack on the organization of some of the departments of the Faculty of Medicine; a disapproval of methods of teaching followed in some departments; an approval of a higher matriculation standard, and a suggestion that the older members of the Faculty should take a friendly interest in the social welfare of medical students, so as to assist in preventing them from straying from the right path.

Defects in organization are ascribed to a plethora of professors, due to the effort of the University of Toronto to find places in its new Faculty of Medicine for the professors of Trinity Medical College, who had agreed to sink their individuality as an independent Faculty and work with their former rivals under a common flag. Dean Clarke advocates but one head for each department of medical teaching. If each of these departments were to be looked at as an office for the despatch of business, public or private, it would seem that a single head, supported by competent assistants, should carry on the work with less friction than if several co-equal rivals were striving to outdo each other in the same department. An army works well under one general; a railway company succeeds best under one general manager; a cabinet thrives under one premier. These are self-evident propositions. However, genuine rivalry among medical lecturers is not in itself a bad thing, or a common thing, either; and although it may not seem consistent with that beautiful regularity which appeals to many minds, is preferable to the stale uniformity of an inferior lecturer in an important department, who, according to the one head theory, has no corrective influence brought to bear on him, unless it be the unflattering inattention of his listeners.

If lecturers in a department of medical teaching were allowed to advocate conflicting methods of diagnosis and prognosis; if, worse still, an allopath, a homeopath, and an osteopath, in rotation, were allowed to lecture on treatment, to the same class, the effects of their rivalry would be confusing. But, as the medical teaching of the University of Toronto is homogeneous and representative of one school of medicine, it is not at all clear how a plethora of competent lecturers and teachers accounts for the badly equipped condition and poor showing of some of the undergraduates at the examinations of the University of Toronto and the Ontario College of Physicians and

Surgeons during the past two years. Some other explanation is necessary.

Dean Clarke objected to the giving of lectures on two subjects by one teacher. In the main this is obviously true; but, if a lecturer on surgery is able and willing to teach, let us say anatomy, there is no good reason why he should be restricted to one or the other of these subjects. The real point at issue in allowing him to teach two subjects is his fitness for the work, and not that he interferes with the appointment of another lecturer. Fitness is the test, and not mere sub-division of labor.

Dean Clarke does not favor didactic teaching in medicine. Didactic teaching reminds one of a set speech in parliament; clinical teaching, of committee work. The former, formal, correctly phrased, demanding continued attention from the audience; the latter, informal, expressed in plain words, and permitting intervals of complete mental relaxation. In estimating the value of either method as a means of aiding students to acquire some inkling into the art or science of medicine, or any of its branches, allowance has to be made for the grip a good lecturer takes on an audience. The teaching of a good lecturer is absorbed and assimilated by bright students with astonishing rapidity; his very words remain graven on their brains. A poor lecturer is tolerated, because his hearers get tired soon, and have to sit out the dance. A lecturer is made, just as the poet is made, and, because the genus, good medical lecturer, is a very rare one, it is plain that a conversational, familiar style of imparting instruction in medicine is the more generally useful one; didactic lecturing the exceptional one.

Whatever praise may be given to a scheme for raising the standard of medical matriculation, there should be no relaxation on the part of examiners in the enforcement of the present matriculation standard in medicine. If carried out without fear or favor, it is a guarantee that the preliminary training of

undergraduates in medicine is sufficient. More should not be asked for.

Dean Clarke's remarks respecting the supervision that should be given by the older members of the Faculty of Medicine to young students who, in many instances, are removed from parental control and allowed to follow their own devices in a great city, are in excellent taste.

Report of the Milk Commission.

There is very much, indeed, that commends itself to physicians in the carefully-prepared Report of the Milk Commission, and our readers would do well to ask for copies of this report from the Chairman of the Milk Commission, W. K. McNaught, M.P.P., Toronto.

Referring to the question of a general milk supply in Ontario, it is shown that, to be pure and wholesome, milk should be treated in a clean, sanitary way. To accomplish this desideratum, every city and town should have a proper system of inspection, and the work of inspection should be done by a veterinarian. If possible, a man should be employed who could give all his time to the work. In the case of small cities and towns, a veterinarian might be employed to do the work, during a portion of his time. The Report shows that, in Ontario, the inspection of dairies has not been done properly, as regards places where milk is sold and, scarcely at all, as regards farms where milk is produced.

The plan for securing inspection recommended in this Report is to empower each municipality to look after its own milk supply. Each city or town should be given the utmost freedom to make inspection at every stage, from the cow to the consumer, and should have power to exclude any milk believed to be contaminated. The question should be one of buyer and seller—a matter of agreement between producer and consumer—just as is done between dairymen and dairy companies, or between

dairymen and milk-condensing factories. The milk companies and the condensing factories send their own inspectors regularly to the farms from which their supplies are drawn. The proper officer to look after the inspection of dairy farms, from which milk is sent to a city or town, would be the Medical Health Officer of that city or town. This recommendation, therefore, is directed chiefly to the governing authorities of the Province, and means that law on the subject should be so worded that the municipalities may be enabled, without let or hindrance, to discharge the office of inspecting the dairy farms, where their milk supplies are produced. The inspection of dairy farms by an officer acting for the consumer is found to be in keeping with the expressed opinions of several Ontario medical health officers. In the July, 1909, number of this journal, the same subject was discussed editorially in the following words: "Local boards of health in municipalities which ship milk to Toronto will not oblige their dairymen to tear down old-style byres in order to construct better ones. They will not insist on proper methods of keeping cattle neat and tidy. They will not order an analysis of the well water of a dairy, nor insist on the removal of a privy situated too close to a dairyman's well. Rural medical officers of health receive a mere pittance for attending to the grosser insanitary evils of their municipalities, and cannot be expected to incur loss of local influence, or loss of money in defending suits for damages, for looking after the purity of the Toronto milk supply. The fear of the Lord is the beginning of wisdom, and the fear of an independent inspector from Toronto, backed by a bacteriologist, will teach the dairymen to observe the rules of the Provincial Board of Health. City inspectors should visit the dairy farms regularly, and should have power to enforce the observance of the rules of the Provincial Board of Health by ordering dairymen to discontinue sending milk to Toronto for disobedience to these rules."

As far as Toronto is concerned, the Report of the Milk Commission shows the necessity of the work of inspection, because, "Exclusive of West Toronto and other recently annexed districts, Toronto consumes 2,336 eight-gallon cans a day, from approximately 900 farms, within a radius not exceeding forty miles."

The importance of a supply of milk suitable for infants is also discussed, and a recommendation made that the municipalities should aid in maintaining milk depots for infants.

The recommendation that, in cities of 50,000 population, milk should not be sold in shops, except in bottles or sealed packages, would slightly increase the cost of milk to consumers; but is the surest way by which pure milk sent from a proper dairy farm can be kept pure and uncontaminated after it has been marketed. Besides, if a sample of milk is found on analysis to be dirty or diluted, it can be traced to the bottler, who should be obliged, by law, to place his stamp on every bottle of milk filled at his shop or dairy farm, as the case may be.

Gifts to the University of Toronto

As the result of discussion of the matter between them, the executors of the Massey Estate have written to the Governors of the University of Toronto, stating that the estate will bear the cost of erecting, as a memorial to the late Hart A. Massey, three buildings, to be of stone and of Gothic architecture, one to contain all that is necessary for the Young Men's Christian Association, and to be administered by them precisely as if built on the University grounds by themselves; a second building, probably of similar size and design, to contain the rooms necessary for the Students' Union, the Athletic Association, and for other purposes in connection with student life. Between the rear part of these two buildings, built so as to leave a lawn or court, possibly closed in front by a wall with a gable, there

will be built a beautiful Gothic hall, also for the use of the students.

Behind these three buildings, the Governors will, at the expense of the University, erect in a style of architecture, consistent with the buildings in front, the gymnasium, swimming baths, etc., so much required by the students, the present gymnasium being absorbed in the group of buildings. The site will be the land in front of the present gymnasium and Students' Union, and southward for the necessary distance.

The part to be borne by the Massey Estate in this new arrangement is a very large and costly undertaking, one of the most important, if not the most important, ever made for the benefit of the public in Toronto.

Handsome residence buildings have also been presented to the University, in one case by Mr. E. C. Whitney, and in another by several other friends of the University.

J. J. C.

The Academy of Medicine to Have a New Home.

We understand from good authority that, owing to the Univeristy of Toronto being unable to give the Trustees of the Academy of Medicine permission to put up the desired buildings, the same to include an auditorium and stack-room, there is every probability of the Academy having a new home in the very near future. It seems that the University intends taking up all of its leases as they fall due, on account of the fact that they have very little property left on which to erect the necessary buildings for educational purposes. The Board of Trustees of the Academy have been considering the advisability of spending from twenty-five to thirty thousand dollars on the present property, but the President of the Board of Governors of the University of Toronto, it seems, cannot see his way to giving the necessary permission for the expenditure of a sum greater than fifteen thousand dollars. We understand that the Massey Estate

has once again come to the assistance of higher education, and has very kindly consented to contribute several thousand dollars towards the erection of a new Academy, and which, with the assistance of others who are interested along similar lines, will mean that the Academy, before any length of time, will have a new building and site worthy of our representative medical body in Toronto. We understand that a new site has been placed at the disposal of the Trustees in Queen's Park, and that it is a very much better one in every way than the present, and one to which there will be attached no building restrictions whatever, and be the home of the Academy for many years to come.

W. A. Y.

Ex-House Staff Dinner

The fifth annual dinner of the ex-house officers of the Toronto General Hospital was held on the 28th ultimo, in the King Edward Hotel, Toronto, Dr. Charles MacGillivray, of the staff of 1890 (now practising at Whitby) presiding.

The number of men still living who have served as internes in the General Hospital now reaches some two hundred and twenty-five, sixty-six of whom practise in the city of Toronto.

Dr. Roland Hill, of St. Louis (of the staff of 1890), gave the usual scientific address on "The Borderland of Medicine and Surgery."

Following the toast list, an interesting ceremony took place—the presentation to Dr. Thomas Cullen of "The Toronto General Hospital Gold-headed Cane." This cane is the gift of Mr. P. C. Larkin, Vice-Chairman of the Board of Trustees, and is somewhat of a replica of the famous gold-headed cane now in the Royal College of Physicians, London, England.

The original cane was carried by six of the leading London physicians in succession, covering a period of 136 years: Radcliffe, Mead, Askew, the two Pitcairns (William and his nephew, David), and Baillie. Baillie died in 1823. His widow presented the cane to the College.

Four years after appeared a book, written by Dr. William Macmichael, bearing the same name as the cane; a second edition appeared in 1828, and a third in 1884. This work is an autobiography of the cane, or a biography of the distinguished holders of it. In it the cane speaks and tells of its experiences with its various owners—in the sick-room of William of Orange, with smallpox; the call to the deathbed of Queen Anne; the intercourse with Hans Sloane, founder of the British Museum; visits to the homes of the leading people in high social standing in the metropolis. Altogether it is a fascinating volume.

As to the T. G. H. cane—it will be carried for one year by the ex-house surgeon who makes the best contribution to medical literature during the preceding year. His name will be engraved upon a disc upon it, and handed on to his successor. For the time, Mr. Larkin is generously providing a silver fac-simile of the cane, to be carried for life by the successful candidate after he passes on the Gold-headed Cane.

Dr. Cullen's contribution was his book on Adenomyoma of the Uterus, and which we hope to review at some length in our May issue.

PERSONAL

We tender congratulations to our collaborateur, Dr. D. King-Smith, on the birth of his firstborn, a daughter, on March 11th.

Dr. E. A. McCulloch, son-in-law of Dr. N. A. Powell, of this city, has been appointed Superintendent of the new Sanitarium for Tuberculosis, to be opened at London, Ontario, on the 1st instant. We wish to congratulate Dr. McCulloch upon his appointment, and feel sure that he will give eminent satisfaction to the Board of Trustees.

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

264 Church St., February 14th, 1910.

My Dear Dr. Young.

I am to-day in receipt of your communication of the 12th inst., in which you express a wish to have "access to the books of the College of Physicians and Surgeons."

The request is of such an unusual nature that I feel obliged to ask you to submit it to the President of the College, Dr. E. A. P. Hardy.

When I receive instructions from him to comply with your request, I shall be pleased to do so.

Faithfully,

H. Wilberforce Aikins.

Toronto, Feb. 16, 1910.

W. A. Young, Esq., M.D., Toronto.

Dear Sir,—I am in receipt of your letter of the 15th. I suppose you refer to page 381 of the 1909-10 Announcement; but I cannot see that the Council agreed with Dr. MacCallum's remarks. The books are open to the inspection of members of the Council at any time, and any member of the College may have the representative of his constituency call for any returns from the Treasurer's Department at any regular meeting of the Council, and these returns will be brought down and submitted to the Council.

You, as a member of the College, have the same rights as all other members—neither more nor less—and you can readily understand that if each of the 4,000 members of the College were to be allowed direct access to the Treasurer's books, these books would be soon defaced and rendered useless for our purposes, if not destroyed by so much handling. Our staff is not sufficiently large to have the Treasurer make out long lists for every member of the College who might demand such lists.

Your territorial representative, Dr. Hart, will receive all the help needed in making out any returns at any time, and you can apply to him to obtain any information, if you wish.

For the above reasons, I cannot accede to your request that you be given permission to examine the Treasurer's books personally. The Council has been criticized lately, I well know; but I have not seen a criticism during the past eighteen months and while I have been President, the subject and object of which has not been considered already by the Council and improvement attempted, whenever and as soon as possible. Such bodies are always open to criticism, sometimes wrongly and oftentimes rightly; but any change or improvement must always come from within and by the actions of those elected to try, to carry out the wishes of the majority of the electors. Therefore, I cannot agree with you when you say that those members of the College who are not members of the Council are the ones to supervise our books and control things to suit their own ideas.

With kind regards, I am,

Yours very truly,

E. A. P. HARDY.

Office of the

Veterinary Director-General and Live Stock Commissioner,

Ottawa, March 11th, 1910.

W. A. Young, M.D.,
Managing Editor
CANADIAN JOURNAL OF MEDICINE AND SURGERY,
145 College St., Toronto.

DEAR SIR,—I have your letter of the 7th inst. in reference to the number of cases of rabies which have come to the knowledge of the Department in the last twelve months.

In reply I beg to state that, from March 1st, 1909, to February 28th, 1910, 234 dogs were placed in quarantine, and in 41 additional cases rabies was definitely diagnosed, in 38 of them by animal inoculation at our biological laboratory here.

Of the 234 dogs placed in quarantine, strong suspicion existed

in the large majority of cases, although definite knowledge could not be obtained. Many of them have, since being quarantined, either died or been destroyed.

Yours faithfully,

J. G. RUTHERFORD,
Veterinary Director-General.

Ontario Board of Health,

Toronto, March 10th, 1910.

Dr. W. A. Young,
Managing Editor,
THE CANADIAN JOURNAL OF MEDICINE AND SURGERY,
Toronto, Ont.

RE RABIES.

DEAR DOCTOR,—Your favor of the 4th inst. is before me, and in reply would state that up to date, so far as I am aware, rabies has only been reported in one case, namely, that of the little boy in Hamilton who died last week.

The disease does, however, exist in animals, and during the past two years evidence has been gradually accumulating which clearly indicates that rabies in animals has been spreading in that portion of Ontario now covered by the rabies regulations.

The evidence of the disease in animals has been verified not only by the laboratory of the Provincial Board of Health, but also in the laboratory of the Veterinary Director-General at Ottawa, in which latter place confirmation has been by animal inoculation.

Since March 1st there have been received at the laboratory of the Provincial Board of Health a number of specimens—generally heads of dogs—and the negri body has been found in specimens received from the following places: West Monkton, Guelph (2), St. Thomas, Toronto, Strathroy, Hamilton (2), Niagara Falls, Rodney (2), Harriston, Forest, Aldershot, Millbrook, Hamilton (boy's brain), Highgate, London, Burgessville, Ingersoll, Waterloo, Goderich and Oakville.

You will therefore see this is no myth or hysteria as regards

animals, and the Hamilton case has also been verified as rabies, Dr. Amyot having found the negri body in the brain of the deceased child.

Looking at the question from a public health standpoint, it is not one as to whether we have rabies in the human being, but with the knowledge that it is in the animal kingdom and can be communicated to the human being, as a wise step in preventive medicine the muzzling order is most essential.

Personally I very much regret the death of the little boy at Hamilton, as it is somewhat of a reflection that the preventive measures of muzzling, etc., were not adopted at an earlier date and thus have saved the boy's life.

Should you desire any further information in this matter I shall be most pleased to give it.

Believe me,

Very truly yours,

CHAS. A. HODGETTS, M.D.,
Chief Health Officer of Ontario.

News of the Month

THE CANADIAN HOSPITAL ASSOCIATION

The fourth annual meeting of the Canadian Hospital Association was held in Montreal on Easter Monday and the following Tuesday. Dr. H. E. Webster, Superintendent of the Royal Victoria Hospital, Montreal, is President, and acted as Chairman. Dr. Christian Holmes, of Cincinnati, and a number of other hospital workers were present. The members of the Association made a round of visits to the different Montreal hospitals, and were given various demonstrations on certain special features of their work. All Hospital Superintendents and Hospital Trustees, as also those particularly interested in hospital work, are eligible for active or associate membership. Dr. J. N. E. Brown, Medical Superintendent Toronto General Hospital, and who is Secretary of the Association, will be glad to give anyone interested full information, and will supply copies of last year's Proceedings, on application.

DR. LUTHER GULICK, OF NEW YORK, ON MEDICAL INSPECTION OF SCHOOLS

That Dr. Luther Gulick, of the Russell Sage Foundation, New York, and President of the American Playgrounds Association, is an advocate of fresh air and cleanliness as means to good health, and that the factors should be made important items in the medical inspection of schools, were facts strongly emphasized in his address on March 15th before the Local Council of Women, on "Medical Inspection in Schools."

The address was based on the relation of medicine to education, pointing out the necessity of the co-operation of the Board of Health and the Board of Education in this vital question.

The first need of medical inspection, said the speaker, was as

a protection to the community against the school as a focal centre for the dissemination of disease. Then there was the question of protection of the children, who, if not in physical condition to be educated, were unable to profit by the instruction given. Instances of children afflicted with deafness, short sight, bad teeth, and other physical defects, were given, and figures presented which proved that children in such condition are slower to progress in their studies, thus proving that, even if taken merely from an economical basis, it was cheaper for the community to provide medical inspection than to pay for the extra period of instruction required for children whose defects are not remedied.

The relation of medical inspection to education, coming directly under the jurisdiction of the Board of Education, was pointed out as including such matters as the examination into the hygienic condition of school buildings, arrangement of the course of studies, physical exercise, athletic sports, etc. Emphasis was laid on the preparation of books in such a way as to do the least harm to the pupil's eyesight. A staff of specialists should have the taking in charge of the mechanical make-up of all text-books, so that the proper margins should be left, the type should be of the proper size, and a proper distance should separate the lines. This should be regulated according to the age of the child.

Regarding the need of fresh air in the school rooms, Dr. Gulick declared the present system of heating and ventilating to be utterly inadequate, the air being so dry that there is less humidity in the ordinary school room than on the Sahara desert. Some of the advantages of the fresh air system the speaker referred to, particularly as in the case of the treatment of pneumonia in the Bellevue and Presbyterian hospitals in New York, where, by putting the patients right out of doors, the rate has been materially decreased.

Special stress was laid on the importance of keeping the schools absolutely free of dust, proclaiming dust as one of the most prolific sources of the ever-prevalent colds which are largely responsible for keeping children from school a great deal of the time.

Dr. Gulick spoke with enthusiasm of the anti-tuberculosis campaign of the present day, and proclaimed that, notwithstand-

ing the fact that a million people fall victims to this disease in a year, the greatest results of the campaign would not be in the stamping out of the disease, but in educating the community to right living by teaching the primary factors of good health.

Referring to the open-air schools for tubercular children in New York, Dr. Gulick stated that the effect of proper living and continual outdoor air, as there demonstrated, was that these children, below par in vitality, made more rapid progress than the grade out of which they have come, and he asked why it is necessary to wait until a child is afflicted with the disease before the steps are taken which would ensure his health.

After Dr. Gulick's lecture, Mrs. A. M. Huestis, the President of the Council, read a bill that will probably be presented to the Provincial Legislature next session, dealing with special treatment in schools for children physically and mentally defective. The audience included a number of physicians and several members of the Board of Education.

McGill University Faculty of Medicine.—The new buildings which are being erected for the accommodation of the Medical Faculty, and to replace those which were destroyed by fire three years ago, are now approaching completion, and will, it is hoped, be ready for occupation in the early summer. The Medical Faculty has therefore decided, with the sanction and approval of the Principal and the Governors of the University, to hold the next Annual Convocation, for the conferring of degrees in Medicine in the new building and to arrange for the formal opening ceremonies at the same time; and to further signalize the event by carrying out a long contemplated plan for a reunion of all her graduates. His Excellency the Governor-General has consented to be present, and a provisional programme has been arranged, a copy of which is appended. All graduates are cordially invited to be present.

The Physician's Library

The Sexual Question. By AUGUST FOREL, Professor of Psychology at, and Director of, the Insane Asylum in Zurich. English adaptation by C. F. Marshall, M.D., M.R.C.S. New York: Rebman Company. 1908.

Probably no subject in the whole range of medicine presents more difficulties or requires to be treated with more delicacy than the one which Prof. Forel has, in this volume of about 500 pages, attempted to treat. His special training and his previous writings upon psychiatry fitted him for the task undertaken, and no candid reader will deny that he has handled the subject in a masterly and scientific manner. Two central ideas dominate all that is here written—the study of nature, and the psychology of man in health and in disease. In logical sequence, all personal and social aspects of the sexual function are taken up.

Following a clear statement of known facts, we have based upon them scientific and convincing arguments, and, in the main, wise and helpful conclusions.

Even when one cannot agree with the author, as, for example, in his justification of certain anti-conceptional methods which are leading to race suicide, his evident candor and the courage of his convictions entitle him to our respect.

The work does not pander to prurient curiosity. It is as far as possible removed from such pornographs as the "Cross-ways of Sex," for the selling of which convictions were recently secured in a Toronto criminal court.

On the other hand, it has nothing of the robust morality which gave to the writings of Sir James Paget a charm and a value too seldom found in medical literature. It has long seemed to this reviewer that no more wholesome reading could be put into the hands of his students than the clinical lectures of Paget upon this as well as upon more strictly surgical subjects.

To expect from a continental writer an equally unreserved upholding of the Seventh as well as the Tenth Commandment may not be quite reasonable, but surely, upon Canadian ears, sentences like the following will strike strangely: "Persons

unable to resist their sexual appetite should be extremely prudent in their extra-nuptial intercourse."

One other quotation, showing how widely a European viewpoint regarding modesty differs from our own, may be given:

"Before engaging in a life-long union, a man and a woman ought to explain to each other their sexual feelings, so as to avoid deception and incompitability later on."

It is but fair to state that expressions like these are few in number, and that, viewed broadly, the work is the best that has yet appeared, or at least, that has come under this writer's notice. Read with discrimination, its influence will be good. It will help the physician in giving advice which he must give if, toward those who need it, he does his whole duty.

N. A. P.

Fifth Annual Report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis. Feb 1, 1907, to Feb. 1, 1908. Published by the Institute, 238 Pine St., Philadelphia. 1909.

In the Fifth Annual Report of the Phipps Institute, there is a splendid account of the clinical and pathological work done by members of the staff, covering the records of 1,475 patients admitted for treatment during the year. Numerous tables are presented, showing the occurrence of special symptoms, physical signs, and various complications in the 733 new patients admitted, and in 4,466 patients treated during the past five years, this part of the Report being from the pen of the Medical Director, Dr. Lawrence T. Flick. Special studies are contributed by various members of the staff, some of which show much attention to detail and form valuable contributions to the literature of tuberculosis. W. W. Cadbury's article on "The Bone Marrow in Pulmonary Tuberculosis" is the first of these. It is based on the findings in fifty-seven autopsies. Following his conclusions is a bibliography of the more important literature on this subject.

Montgomery has an article on "Percussion Tenderness in Pulmonary Tuberculosis," a phenomenon noted by Larnuec and other French writers, but to which little attention has been paid by clinical teachers of the present day.

Landis contributes a well-illustrated article on "Fibrosis of the Lung"; Staunton, a report on sixty-one cases of pneumo-

thorax, and D. J. McCarthy, a pathological study of the organs and tissues of a man with pre-natal polio-myelitis, dying at thirty-two from tuberculosis. Work such as that recorded in this report should be a great source of satisfaction to Mr. Henry Phipps, whose great benefactions have made it possible—not only the scientific researches, but the practical application of modern methods of treatment to the poor of a great city.

It is worthy of note that the nurses employed by the Institute have all been patients under treatment at the Institute, or at the White Haven Sanatorium. J. H. E.

The Practice of Surgery, with 20 colored plates, 28 skiagram plates, and 707 black and white illustrations. By the late Walter George Spencer, M.S., M.B. (Lond.); F.R.C.S., Eng.; Surgeon and Lecturer on Surgery, Westminster Hospital; Member of the Court of Examiners, Royal College of Surgeons of England; Late Examiner in Surgery, University of London; and George Ernest Gask, F.R.C.S., Eng., Assistant Surgeon and Demonstrator of Practical Surgery, St. Bartholomew's Hospital. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut-Strett. 1910.

This is the tenth edition of the work originated by the late W. J. Walsham, which has been so long and favorably known to the medical profession. Under the present authorship, the volume, which consists of 1234 pages, has undergone very considerable change, both in the subject matter and in the rearrangement of the order of subjects. This book is written to fulfil the requirements of the modern text-book in surgery, and this object is accomplished in a very satisfactory and complete fashion. In addition to this, however, it will be found a useful guide for the practitioner engaging in surgical practice. There are many excellent illustrations in the text, and 20 colored plates. Reproductions of skiagrams, of which there are 28, have also been used to great advantage in the illustration of diseases of bones and joints, and it may be added that these skiagrams are of quite remarkable excellence.

It is impossible in a short notice to give any detailed account of the merits of this text-book, but it is quite obvious, after a critical inspection, that it covers the ground of modern surgery

in a most concise and clear manner, and one may safely predict that the work under review will soon become a favorite among students and practitioners, to whom, without any reservation, we recommend it very heartily. A. P.

The Practical Medicine Series. Vol. IV.—Gynecology. Edited by Drs. E. C. Dudley and C. Von Bachelle, of Chicago. The Year Book Publishers, Chicago. 1909.

This is one volume of a series well worthy the consideration of every man engaged in general practice. In all, ten volumes are issued yearly, and in their compilation the entire field of medicine is reviewed by experts, who present in concise form all notable advances. Its special advantage is that the numbers are sold separately, so that the physician is able to select only such as appeal to him personally and are likely to prove helpful in the round of his daily work. To but few of us is it given to have ready access to all the leading journals in the language or languages at our command. Those so favored are quite unlikely to have time at their disposal for the systematic study of the ever-increasing supply of journal literature. Hence, it comes about that it is of exceeding value to have others seek out and set in order whatever is of greatest interest and utility. The editors of this section have been most conscientious in their work, and this year, as in past years, they have made us their debtors by exercising good judgment and ripe scholarship in the selections made for our use.

Under the heads of: 1, General Principles; 2, Infectious and Allied Disorders; 3, Malformations and Tumors; 4, Traumatisms; 5, Displacements, and 6, Disorders of Menstruation, they give us not alone the leading contributions of the year, coming from English-speaking writers, but also translations from French and German periodicals.

Illustrations of excellent character are used freely throughout the volume.

The writer of this notice has been amply repaid for the time given to this and other numbers of the series, and he commends it unreservedly to the readers of The Canadian Journal of Medicine and Surgery.

N. A. P.

Manual of Operative Surgery. By JOHN FAIRBAIRN BINNIE, A.M, C.M. (Aberdeen), Professor of Surgery, Kansas State University, Kansas City; Fellow of the American Surgical Association; Membre de la Societe Internationale de Chirurgie. Vol. 11—Vascular System, Bones and Joints, Amputations. Fourth Edition. Revised and enlarged, with 550 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1910.

This volume of 553 pages, being Volume 11 of Dr. Binnie's "Manual of Operative Surgery," includes the surgery of the vascular system, bones and joints, and amputations. The manual is already well known to the profession at large, and is uniformly appreciated as a most valuable guide to operative surgery. The author has succeeded in a remarkable manner in condensing into a comparatively small compass a description of the vast majority of operative procedures which the general surgeon finds necessary to employ. The description of technique is very clear and adequate, and the book is further enhanced in value by many excellent illustrations.

Without reservation, we would recommend this work as a most trustworthy guide for operative surgery. A. P.

Studies in Tuberculosis. By HENRY CLARKE, M.A., M.D. (Cantab.), Physician to the Liverpool Hospital for Consumption and Diseases of the Chest, and Superintendent of the Research Laboratory of the Hospital. Pp. 60+IV., with 9 charts. Liverpool: The University Press.

We have enjoyed reading this recent contribution to the literature of tuberculosis. It is essentially a record of observations upon the use of tuberculin in the Liverpool Hospital for Consumption. There is a hurried review of methods of diagnosis, and a rather broad discussion of preventive measures, but the interest of the work lies in the author's experience with tuberculin. He has found tuberculin of marked service in the treatment of cases. He describes, in fair detail, his methods of administration, and tabulates carefully his results. He relies principally on B. E., and finds it unnecessary to control the dosage by estimation of the opsonic index.

The history forms published on pp. 58, 59 seem very simple

and incomplete, when compared with the elaborate ones generally used in sanatoriums on this side of the Atlantic.

J. H. E.

La Cure Radicale de la Hernie Inguinale, lecons professees a l'Hotel-Dieu, par le DOCTEUR LUCAS-CHAMPIONNIERE, Chirurgien Honoraire de l'Hotel-Dieu; Member de l'Academie de Medicine; President de la Societe Internationale de Chirurgie. Avec 53 figures dans le texte. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne, 2. 1909.

This volume of 192 pages is devoted to the consideration of the radical cure of inguinal hernia by operative means. The author is one of the best-known French surgeons, and has been an outstanding figure in the medical profession for many years. He is best known, perhaps, for the work he has done in connection with the treatment of fractures by mobilization. The present treatise is written with great care and logical argument, and he advocates his special method of dealing with inguinal hernia on excellent theoretical grounds, and backs up his argument by quoting statistics showing the good results of treatment along the lines indicated. The neck of the sac is transfixed, ligated, and the sac removed, whilst the suture constricting the neck is fixed through the abdominal parietes by being carried through the muscular wall. The subsequent steps of the operation are somewhat similar in principle to those of Bassini, using, however, an imbricating method by interrupted mattrass sutures in the closure of the incision in the external oblique aponeurosis.

This monograph will be found interesting and useful, and an admirable guide.

A. P.

Dose-Book and Prescription-Writing. By E. Q. THORNTON, M.D., Assistant Professor of Materia Medica, Jefferson Medical College, Philadelphia. Fourth Edition, revised. 12mo. of 410 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1909. Flexible leather, $2.00 net. Canadian agents, The J. F. Hartz Co., Ltd., Toronto.

This little manual of prescription-writing and dose-book has reached its fourth edition in a very short space of time.

It deals with weights and measures, both English and metric

systems, the method of converting one into the other; prescription-writing, including incompatibilities and a table of solubilities, the latter being entirely revised and re-written in this edition.

The official drugs and preparations, with their dosage and methods of administration, are fully dealt with, and it winds up with an appendix of the poisons and their antidotes, a useful section of exercises and answers, a list of synonyms of common drugs and preparations, a table of average doses for adults, in both systems, and a comparative table showing strength of the more important substances and preparations in the preceding and present pharmacopœia.

The manual is thorough and lucid and cannot fail to be of service to both the undergraduate and graduate in his early period of professional career. W. H. P.

Medical Diagnosis. A Manual for Students and Practitioners. By CHARLES LYMAN GREEN, M.D., St. Paul; Professor of Medicine and Chief of the Department in the College of Medicine, University of Minnesota; Attending Physician, St. Luke's Hospital and the City and County Hospital; Chief of the Medical Clinic in the University Hospital; Member of the Association of American Physicians, the American Therapeutic Association; Author of "The Medical Examination for Life Insurance, and Its Associated Clinical Methods," etc. Third Edition, revised, with 7 colored plates and 248 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1910.

The third edition of Dr. Green's book is certainly a most creditable publication. It contains 7 colored plates and no less than 248 other illustrations. The author has dedicated his volume "To My Students, Past and Present."

There is no doubt that, year by year, such advances are made in almost all branches of Medicine that it is almost essential that just such a work as Dr. Green's should be rewritten from time to time. This the author has done in the third edition of his "Medical Diagnosis," and it can only be a pleasure to the publishers of a Medical Journal to recommend just such a book as Dr. Green's to their readers. The book has been thoroughly re-

vised, the majority of it being re-written. The volume covers nearly seven hundred pages, the different chapters dealing with "Outward Signs of Disease," "Age, Habits and Residence in Disease," "History and Analysis of Certain Common Symptoms," "Diseases of the Thoracic Viscera," "Diseases of the Nose, Pharynx and Larynx," "Diseases of the Bronchi," "Diseases of the Heart and Blood-Vessels," "Diseases of the Abdominal Organs," "Diseases of the Blood and Ductless Glands," "Infectious Diseases," "Intoxications," "Parasitic Diseases," "Rheumatic Affections," "The Nervous System and Its Diseases," "Malingering," "Symptoms and Treatment of Acute Poisoning." The book is printed on the very best of paper and richly bound in leather. W. A. Y.

A Synopsis of Surgery. By Ernest W. Hey Groves, M.S., M.D., B.Sc. (Lond.), F.R.C.S. (Eng.), Assistant Surgeon to the Bristol General Hospital; Surgeon to the Cossham Hospital; Senior Demonstrator of Anatomy at the Bristol University. Second Edition, revised and illustrated. Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1910.

According to the preface to the first edition, this is "an attempt to make an epitome of the salient facts in surgical practice." The attempt seems to be in this the second edition an eminently satisfactory one. Probably the last chapter, on "Surface Markings," is the most useful one in the book.

F. N. G. S.

A Compend of Histology. By Henry Erdmann Radasch, M.D., Associate of Histology and Embryology, and Demonstrator of Visceral Anatomy in the Jefferson Medical College; Adjunct Professor of Physiology and Instructor in Histology in the Pennsylvania College of Dental Surgery. Second Edition, revised and enlarged, with one hundred and seven illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1909.

In October, 1905, we had the pleasure of reviewing the first edition of this little volume, and now it is our good fortune to be given the opportunity of criticizing its second edition.

We find a number of changes and additions in the circulatory system, for instance, The Bundle of His, Hemolymphnodes, and the Parasympathetic Bodies.

The nerve system has been somewhat re-written and several cuts added.

The histology of the tooth has been much enlarged upon to meet the demand of the dental students, and an entirely new chapter on the development of the face and teeth, with appropriate cuts, added.

The original purpose of the author, viz., to supply an article midway between the existing compends and the text-book seems to have been fully realized.

Students, as well as medical practitioners, constantly require just such a book as this when comparing the normal with the pathological changes in their clinical cases. W. H. P.

The Prevention and Treatment of Abortion. By FREDERICK J. TAUSSIG, A.B., M.D.; Lecturer in Gynecology, Medical Department, Washington University; Obstetrician to the St. Louis Maternity Hospital; Gynecologist to the St. Louis Skin and Cancer Hospital; Fellow of the American Gynecological Society, and American Association of Anatomists. Fifty-nine illustrations. St. Louis: C. V. Mosby Company. 1910.

The general practitioner will find in this book very valuable assistance in the management of these cases. The methods adopted are explained with clearness, and the instructions that are given for the prevention of abortion will be found to many to be very valuable suggestions. The drawings are very good; the type and style of the book are excellent, and the whole book is one well worth the attention of the general practitioner.

There is a short chapter upon the prevention of criminal abortion, a subject to which one would have liked to have seen more space devoted.

The operative technique is explained in a way that everyone who reads must easily understand it.

There is also an appendix on "Missed Abortion" and "Mole Pregnancy," "Therapeutic Abortion" and "Ergot and Its Preparations," which contains the latest ideas on these subjects.

A. J. J.

Prostatic Enlargement. By CUTHBERT S. WALLACE, M.B., B.S. (London), F.R.C.S. (England); Surgeon to the East London Hospital for Children, and Surgeon to Out-Patients, St. Thomas's Hospital; Teacher of Practical and Operative Surgery in the Medical School.

This book is a result of investigations which commenced in 1900 and extended until 1907. The first points to be taken up were the structure of the prostate and its relation to its fibrous sheath and to the bladder. It was quite obvious that the normal organ could not be detached from its surroundings by a process resembling that used in the dissecting-room.

Pathological specimens revealed compression, by adenomatous masses, of the outer part of the organ.

The formation of an envelope here seems to afford an easy explanation of the facility of enucleation and the absence of post-operative stricture. The finding of this pathological envelope shows that the operative surgery of any disease must not be considered without reference to its morbid anatomy and pathogenesis.

The book is nicely illustrated and presents the subject in a very scientific and up-to-date manner. It will be found valuable and interesting to surgeons who do prostatic work. It can be had from the Canada Law Book Company, 32 and 34 Toronto Street, Toronto, at 40% discount.

Surgery of the Brain and Spinal Cord. Based on Personal Experiences. By PROF. FEDOR KRAUSE, M.D., Augusta Hospital, Berlin. Translated by Prof. Herman A. Haubold, M.D.; Clinical Professor in Surgery, Bellevue Hospital and New York University Medical College; Surgeon to Harlem and New York Red Cross Hospitals, etc. Vol. 1, with 63 figures in the text, 24 colored plates and one half-tone plate. New York: Rebman Company, 1123 Broadway.

An effort has been made by the translator to preserve the peculiarly effective method of expression employed by the creator of the original work. This causes a little involved phrasing, but any added effort to clearly comprehend the text is justified on the ground that the original author's efforts should have this additional tribute shown.

The publisher is to be congratulated upon giving the English-speaking practitioner an opportunity to become acquainted with a work which may be properly regarded as setting a high standard of literary and artistic production.

The subject is dealt with in a masterly fashion, and will well repay the time spent in reading it. The illustrations are particularly well done.

Decompression trephining, craniocerebral topography, brain puncture and puncture of the ventricles, lumbar puncture and radiography are taken up in this volume. Price $6.00.

H. A. B.

Examination of the Urine. A Manual for Students and Practitioners. By G. A. De Santos Saxe, M.D.; Insructor in Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital; Assistant Genito-Urinary Surgeon, Bellevue Hospital, Out-Patient Department; formerly Assistant Pathologist to the Columbus Hospital; Member of the American Urological Association; Fellow of the New York Academy of Medicine, etc. Second Edition; revised; with text illustrations and colored plates, a number of them original. Philadelphia and London: W. B. Saunders Company. 1909.

This work is well up-to-date on urinary examinations. It is divided into five parts. Part one deals with the urine in health, the selection of specimens and physical properties of urine. In Part two we have the chemical examination, including examination of proteids, carbohydrates, nitrogen, acetone, coloring matters and inorganic constituents. Part three gives the microscopical examinations. Part four, urinary, and Part five, functional renal diagnoses. An appendix gives a list of reagent formulæ, stains, etc.

Throughout the whole work the clinical aspect of urinalysis, as well as the purely laboratory consideration, is kept well to the fore. The plates are numerous and well chosen.

This work is calculated to give the general practitioner or student all he can possibly require in urinary examination.

W. J. W.

An English Handbook to the Paris Medical School. (With map.) By A. A. WARDEN, M.D.; Visiting Physician to the Hertford British Hospital, Paris. Second Edition. Price 2s. net. London: J. & A. Churchill, 7 Great Marlborough Street. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street. 1910.

This is a small booklet dealing with such subjects as "Post-Graduate Work in Paris," "The Faculty of Medicine," "The Hospitals," "The Pasteur Institute," and the museums, libraries and other institutions in Paris. It is full of information and will be found especially useful to physicians intending to visit Paris during their vacation.

Living Anatomy and Pathology. The Diagnosis of Diseases in Early Life by the Roentgen Method. By THOMAS MORGAN ROTCH, M.D.; Professor of Pediatrics, Harvard University. Three hundred and three illustrations. Philadelphia and London: The J. B. Lippincott Company.

This volume is undoubtedly one of the handsomest dealing with the Roentgen Ray that has reached our desk in years. It is a volume of 265 pages and includes 303 splendid half-tone illustrations.

During the past ten years the Roentgen Ray has come to be used very largely in surgical diagnosis, so that a book such as the author now favors the profession with will be found immensely valuable to workers along this line. We can safely say that we have seldom come across such beautiful skiagraphs, the half-tone work being of the highest type. Plate No. 2, showing a skiagraph of a premature infant, is undoubtedly one of the best we have seen. The author undoubtedly has favored the profession with a work that should for years to come be looked upon as one of the best on the subject. The book is devoted to the diagnosis of disease, the author not having attempted to pay any attention to the subject of treatment. The volume will be found useful, not only to the surgical practitioner, but to any student who desires to equip himself with an adequate knowledge of the Roentgen method and its application to surgery. The book is divided into nine divisions, the different divisions being devoted to "Living Normal Anatomy," "Illustrative Use of Living

Normal Anatomy," "Diseases of the New-Born," "Diseases of Nutrition," "Diseases of the Head and Spine," "The Bronchial Nodes — Bronchi — Lungs — Pleura — Heart — Pericardium — Aneurism," "The Abdomen," "Foreign Bodies," "Extremities."

We heartily recommend Dr. Roteh's work to our readers, it being worth considerably more than the price asked for it by the publishers. W. A. Y.

Modern Astronomy. Being some account of the Revolution of the last quarter of a century. By Herbert Hall Turner, F.R.S.; Savilian Professor of Astronomy and Fellow of New College in the University of Oxford. Popular edition. London: Constable & Company, Ltd.. 10 Orange Street, W.C.

Professor Turner's book is a volume of two hundred and fifty pages, and is divided into four sections in all. The sections deal with "Modern Instruments as Used in Astronomy," "Modern Methods," "Modern Results" and "Modern Mathematical Astronomy." The book also contains a number of good illustrations, and will be found very interesting to students of astronomy in general.

Medical Lectures and Clinical Aphorisms. Samuel Gee, M.D., F.R.C.P., Consulting Physician to St. Bartholomew's Hospital, etc. Second Edition. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Sq., E.C.

This little book of 300 pages is divided into two parts. The first 258 pages are taken up with fifteen lectures, dealing with such subjects as Cerebral Hemorrhage, Coma and Apoplexy, Aphasia, Delirium, Bronchitis, Emphysema, Asthma, Tubercular Peritonitis, Acute Peritonitis, and Sects in Medicine. The remainder of the work is occupied by some 272 medical aphorisms. The writer deals with many matters of the greatest interest to the medical practitioner, though in a necessarily brief but very practical manner. On perusal of the book one is impressed rather with the good common-sense and clinical acumen of the author rather than by anything especially new or original that it contains. It may be read with profit as well as pleasure by physicians generally. H. W. A.

A Practical Guide to the Administration of Anesthetics. By R. J. PROBYN-WILLIAMS, M.D.; Senior Anesthetist and Instructor in Anesthetics at the London Hospital; Lecturer on Anesthetics at the London Hospital Medical College; Anesthetist at the Royal Dental Hospital, of London; lately President of the Society of Anesthetists. Second Edition. London and New York: Longmans, Green & Co.

This revised edition of the first will meet with general satisfaction, as it contains a faithful and accurate description of all the modern methods and appliances, with new chapters on the use of Ethyl Chloride, and Spinal Analgesia.

This second edition, by such revision and addition, commends itself very highly to the medical profession as a source of practical, up-to-date suggestion and information from this well-known authority on anesthetics. S. J.

Ophthalmic Surgery. By CHARLES H. BEARD, M.D., Surgeon to the Illinois Charitable Eye and Ear Infirmary; Oculist to the Passavant Memorial Hospital, Chicago; ex-President of the Chicago Ophthalmological Society. Philadelphia: P. Blakiston's Son & Co. 1910.

A peculiar misadventure has befallen this book: while in the hands of the binders pp. 385 to 400 have disappeared and been replaced by the corresponding pages of a work on Medical Jurisprudence. One can imagine the language of the author when he discovers what his publishers have done. The usual introductory chapter on preparation for operation, anesthesia, applications after operations, is followed by a most interesting and instructive description of instruments, and of the features which are essential to a good instrument. Then follow chapters on operations, lacrimal apparatus, extra-ocular muscles, lids, conjunctiva, globe, orbit, and last of all a separate chapter on removal of foreign bodies from the eye. This is really the first book on ophthalmic surgery as representing the American school of ophthalmic surgeons. The Vienna school, the London school and the Paris school have all had numerous exponents. Dr. Beard seeks to give in book form many of the practical and ingenious methods or modifications of standard operative measures which, originating in America, are found scattered in ophthalmic

literature. The result is a book not too concise, yet very readable, full of valuable hints and suggestions. M.

A Text-Book Upon the Pathogenic Bacteria. For Students of Medicine and Physicians. By JOSEPH MCFARLAND, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Sixth Revised Edition. Octavo of 709 pages; fully illustrated, a number in colors. Philadelphia and London: W. B. Saunders Company. 1909. Cloth, $3.50 net. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

This, the sixth revised edition of McFarland's Pathogenic Bacteria, covers, in a very careful manner, the ground in general bacteriology. The book is really a carefully edited selection of much that is good, derived from many sources. The drawings and illustrations are quite as good as found in similar works published in English, not, however, to be compared with the German texts which are no more comprehensive. The subject matter is entertainingly written, and for the most part is clear, concise and comprehensive. As a guide to practitioners, as well as a book of reference for students, it can be cheerfully recommended. J. G. F.

Text-Book of Medical and Pharmaceutical Chemistry. By ELIAS H. BARTLEY. Seventh Revised Edition. Philadelphia: P. Blakiston & Co.

The scope of this work is very considerable, and the effect will be realized when one consults the table of contents, where it will be seen that the subjects of Physics, Inorganic Chemistry, Organic Chemistry, Pharmacognosy, Clinical Laboratory Methods, Physiological Chemistry, Clinical Bacteriology, etc., are covered in 600 pages. While the book includes much that is useful, it is not one that could be recommended to medical students, since a great many of the topics are treated in an altogether too general fashion and quite too much ground is covered in this way. It is impossible to deal adequately with more than one or two of the subjects discussed. Had the author confined his attention to fewer subjects, the results would have been decidedly more desirable. J. G. F.

Biographic Clinics. Vol. VI. Influence of Visual Function Upon Health. By GEORGE M. GOULD, M.D. Philadelphia: P. Blakiston's Son & Co. 1909. $1.00 net.

Again "a voice crying out in the wilderness," but after all is it such a wilderness as our good friend George M. Gould appears to think? Does the medical profession really not recognize how disturbed visual functions do affect the general health? Are the majority of oculists in America a unit in the belief that the health may not be affected by the condition of the eyes?

In season and out of season, Dr. Gould has never wearied in advocating this proposition. To his advocacy is to a great extent due its general acceptance. It delights him to larrup his fellow-practitioners. The larruping makes fine reading and gives point to many an idea—and how he must enjoy it himself. After all, the bark is worse than the bite. All boiled down, thoroughness of observation is really what Dr. Gould is advocating, and with that no true physician can find fault.

M.

Atlas of External Diseases of the Eye. For Physicians and Students. By DR. RICHARD GREEFF, Professor of Ophthalmology in the University of Berlin. Translated by P. W. SHEDD, M.D. New York: Rebman Company, 1123 Broadway.

This is indeed an edition de luxe, in binding, paper, letterpress, and above all, in the illustrations, 84 in all. The plates are in color, made from wax models, and these models are made from masks of the living patient. In nearly all atlases the colors are too garish; in this, one at once appreciates how true to life they are. Nothing could be better than the plates of erysipelas facies, subconjunctival hemorrhage, trachoma, and vernal catarrh, Hutchinson's teeth and rachitic teeth. J. M.

Electricity for General Practice. By F. STEWART POVAH and F. DAVIDSON. Price 3 shillings net. Published by F. Davidson & Co., 29 Great Portland Street, London, W.

Under this title, F. Davidson & Co. publish an illustrated catalogue of electrical instruments, chiefly of their own manufacture, prefaced by some useful information regarding electricity. C. R. D.

Treasures of Truth. By GEO. F. BUTLER, Author of "Love and Its Affinities," "The Isle of Content," "Sonnets of the Heart," etc. S. DeWitt Clough, Ravenswood, Chicago. Price 75 cents. Leather bound, $1.00.

We are indebted to Dr. Geo. F. Butler, of Chicago, for the copy of his small book, entitled "Treasures of Truth." The book is but small, at the same time it contains a good deal of the finest kind of philosophy. Our readers will be able to spend most pleasantly an occasional half-hour in its perusal, with benefit to themselves and to others.

Surgery. Its Principles and Practice. In five volumes. By 66 eminent surgeons. Edited by W. W. KEEN, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin.; Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume V. Octavo of 1,274 pages, with 550 illustrations, 45 in colors. Philadelphia and London: W. B. Saunders Company. 1909. Per volume: Cloth, $7.00 net; half-morocco, $8.00 net. Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

The contents of Volume V. are: Surgery of the Vascular System, by Rudolph Matas, M.D.; Surgery of the Female Genito-Urinary Organs, by E. E. Montgomery, M.D., John M. Fisher, M.D., and P. Brooke Bland, M.D.; Surgical Technic, by John H. Gibson, M.D.; Ligation of Arteries in Continuity, by Warren Stone Bickham, M.D.; Operations on Bones and Joints, by Peter Warbasse, M.D.; Amputations, by Warren Stone Bickham, M.D.; Plastic or Reconstructive Surgery, by John B. Roberts, M.D.; Surgery of Accidents, by William L. Estes, M.D.; Surgery of the Parathyroid Bodies, by Charles H. Mayo, M.D.; The Intracranial Surgery of the Fifth (Trigeminal) and the Eighth (Auditory) Nerves, by Charles H. Frazier, M.D.; General Anesthesia and Anesthetics, by Hobart Amory Hare, M.D.; Local and Subarachnoid (Spinal) Anesthesia, Local Anesthesia, by Karl G. Lennanler, M.D.; Subarachnoid (Spinal) Anesthesia, by Fredrik Zachrisson, M.D.; The Surgery of the Infectious Diseases, by George E. Armstrong, M.D.; The Use of the X-ray and Radium in Surgery, by Ernest Amory Codman, M.D.; The Local Relations of the Surgeon, by Hampton L. Carson, Esq.; The

Laboratory as an Aid to Surgical Technic and Surgical Diagnosis, by William M. Late Coplin, M.D.; The Surgical Organization of a Hospital, by Albert J. Ochsner, M.D., and The Index.

Dr. Keen announces in a postscript the death of Lennander, who completed part of his work, and Mikulicz, who had not even had the opportunity to begin his task. It is also stated that the completed work covers nearly 5,500 pages (instead of 4,000, as promised in the prospectus), to say nothing of the large increase in the amount of text from using smaller type in certain parts. So far as the interest excited in the reader by the subjects treated of goes, the fifth and concluding volume of Dr. Keen's Surgery is superior to some of its predecessors. A glance over the list of subjects given above will make this assertion clear. The distinguished editor has been sustained by a company of capable assistants, and has every reason to feel gratified at the successful completion of so great a work. J. J. C.

A Text-Book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Third Edition; thoroughly revised. Octavo of 998 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1909. Cloth, $4.00 net; half-morocco, $5.50 net. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Dr. Howell's book is a volume of nearly one thousand pages, and is divided into ten sections. The different sections deal with such subjects as Physiology of the Muscle and Nerve, the Central Nervous System, the Special Senses, Blood and Lymph, the Organs of Circulation, of Respiration, of Digestion and Secretion, of Nutrition and Heat Production.

The third edition appears to have been thoroughly revised and carefully gone over, notwithstanding the fact that it is less than two years since the last edition of this book appeared from the press.

We have looked carefully through the volume, though not as fully as we hope to, and can say with candor that it is a publication that will be found of the keenest interest not only to the physiologist, but also to the physician and medical student.

A Handbook of the Diseases of the Nose, Throat and Ear. By EUGENE S. YONGE, M. D. (Edin.), Physician to the Manchester Hospital for Consumption and Diseases of the Throat; Physician to the Crossley Sanitorium. Edinburgh and London: William Green & Sons, Medical Publishers. 1909.

This is a book of nearly four hundred pages, written in the hope that it will prove a help to the general practitioner. In this the author has very thoroughly succeeded, as he has taken pains to avoid giving too much space to the rarer diseases and major operations, which concern, as a general rule, specialists rather than those whose time is not entirely taken up with nose, throat, and ear work. The illustrations are very clear and well chosen, those in colors being particularly well done. The book is pleasant to read; the type is large and the spacing good.

P. G. G.

A Text-Book of the Practice of Medicine. By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Ninth Revised Edition. Octavo of 1326 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1909. Cloth, $5.50 net; half-morocco, $7.00 net. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The ninth edition of Dr. Anders' valuable work on the practice of medicine has just appeared. It certainly says a great deal for any one work that it can appear in nine separate and distinct editions, and goes to show that it has met with a ready acceptance at the hands of the profession. The ninth edition has been thoroughly revised by the author, and, as he states in his preface, his "aim has been to add the most important practical advances since the date of the previous issue, at the same time eliminating as much of the text as has become more or less obsolete, thus obviating any material increase in the size of the volume."

The work has been divided into eleven sections. Part one deals with "Infectious Diseases"; part two with "Animal Parasitic Diseases"; part three with "Constitutional Diseases"; part four with "Diseases of the Blood and the Ductless Glands";

part five with "Diseases of the Respiratory System"; part six with "Diseases of the Circulatory System"; part seven with "Diseases of the Digestive System"; part eight with "Diseases of the Urinary System"; part nine with "Diseases of the Nervous System"; part ten with "Diseases of the Muscles," and part eleven with "The Intoxications; Obesity; Heat Stroke."

This book covers in all a little over thirteen hundred pages. One thing can be said of "Anders' Practice of Medicine," and that is that it is essentially practical, something which cannot be said of other somewhat similar works. Dr. Anders has paid considerable attention throughout to the relationship existing between Diagnosis and a full knowledge of just such subjects as Chemistry, Physiology, Bacteriology, Morbid-Anatomy and Pathology. The author has paid very considerable attention to Treatment, giving his readers not only the result of long personal experience as a practitioner and teacher, but presenting to the profession the different methods of treatment adopted by others.

The Practical Medicine Series. - Comprising ten volumes on the year's progress in medicine and surgery. Under the general Editorial charge of GUSTAVUS P. HEAD, M.D. Volume IX. Skin and Venereal Diseases, Miscellaneous Topics. Edited by W. L. BAUM, M.D., HAROLD N. MOYER, M.D. Series 1909. Chicago: The Year Book Publishers, 40 Dearborn St.

This book gives a good review of the most important points brought before the profession during the past year. Many most interesting facts are briefly described, so that the general practitioner can keep well posted in the many new therapeutic methods which are constantly coming to the front. It is a good work to have handy for ready reference. D. K. S.

Exercise in Education and Medicine. By R. TAIT MCKENZIE, B.A., M.D. Philadelphia: W. B. Saunders & Co.

In recent years medical treatment has become much more rational. Whatever philosophical or religious views medical practitioners may have held, their teaching to prepare them for their life work and practice afterward were essentially materialistic. It has been assumed in many quarters that there were no human ills which would not yield to drugs, if amenable

to any treatment. A scientific presentation of the important subject of exercise can do much to aid in rationalizing the treatment recommended for those suffering from functional disorders, and to a less degree for those having some forms of organic disease.

The author has the advantage of having a double qualification. He has had a liberal scientific training, and has long been a specialist in physical education, being the first to be chosen to fill a university chair in the furtherance of this work.

The range and application of exercise, scientifically graded and directed, is as wide as the functional and psychical ills of humanity.

In the intelligent treatment of backward children—a crying need in Canada—this is the chief method of approah. The obstructed avenues of intellectual perception can best be opened up by "sensorial" gymnastics. Among children there should be no "non-ambulatory cripples"—mental or physical. Practically all, except the very lowest in mental equipment, can be trained not only to help themselves, but to do something to help others. There is no means which man be employed more effectively to accomplish these results than physical training wisely directed by a tactful teacher. Not only is the physical equipment improved, but the mentality is rendered much more alert, and brought to a condition of more effectiveness.

In the treatment of such conditions as lateral curvature of the spine, round shoulders, hollow chest, etc., the treatment by constrictive methods is harmful; while health is invigorated and the deformity cured or improved by the graded use of physical training.

The intelligent, aggressive physician will find here much material for study. The non-progressive need not get the book.

B. E. M.

Dorland's American Illustrated Medical Dictionary. A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, and kindred branches; with new and elaborate tables and many handsome illustrations. Fifth Revised Edition. By W. A. NEWMAN DORLAND, M.D.. Large octavo of 876 pages, with 2,000 new terms. Philadelphia and London: W. B. Saunders Company. 1909.

Flexible leather, $4.50 net; indexed, $5.00 net. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The fifth edition of this well-known medical dictionary exhibits fresh features indicative of continuous growth and improvement. It contains new tables, several fresh illustrations, and over 2,000 new terms. The type is clear, and it is an attractive-looking volume, of convenient size, and is deservedly popular with physicians. J. J. C.

Clinical Lectures and Addresses on Surgery. By C. B. Lockwood, Surgeon to St. Bartholomew's Hospital. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E.C. 1907. This book may be procured from the Canada Law Book Company, 32-34 Toronto Street, Toronto, at 40% discount.

As one would expect, this is a most instructive series of lectures. They are taken up under the following heads:

1. An Introduction to the Study of Clinical Surgery.
2. Clinical Reasoning.
3. The Course of Intra-Abdominal Inflammation.
4. On the Recognition and Management of Intestinal Obstruction.
5. The Essentials of a Diagnosis.
6. Secondary Infection of the Lymphatic Glands in Malignant Disease of the Tongue.
7. Carcinoma of the Breast, and its Spread Into the Lymphatics.
8. Varicose Veins.
9. Swellings Above, Below and Within the Neck of the Scrotum.
10. Swellings Above, Below and Within the Neck of the Scrotum—Particularly Inguinal Varicocele and Hydrocele.
11. Exploratory Laporotomy, Especially in Cases of Malignant Disease.
12. Fecal Leaks and Fistulæ.
13. The Immediate Microscopical Diagnosis of Tumors During the Course of Operations.

In the "Introduction to the Study of Clinical Surgery" he lays emphasis upon the necessity of a correct diagnosis. He

claims that "the point of honor of the medical man is the safety and welfare of the patient. Now the safety and welfare of the patient cannot be safeguarded without a correct diagnosis of the disease or injury. Clearly it behooves all of us to use our best endeavors to learn that indispensable art. To make a correct diagnosis the patient has to be examined. Now the examination of the patient is guided by a few simple rules. First, and above all, by those of Sir George Humphrey, 'Eyes first and much, hands next and little, tongue not at all.' No one could tell in a few words the meaning of these; but after a while, as their import becomes known, you will learn to use them without thinking and as a matter of habit."

This quotation will suffice to whet the appetite for more, and we would recommend this book to all readers as one of the most delightful that it has been our good fortune to peruse.

F. N. G. S.

Practical Points in the Use of X-ray and High-Frequency Currents. By ASPINWALL JUDD, M.D., formerly Radiologist, Post-Graduate Medical School and Hospital; Adj. Professor of Surgery of the Post-Graduate Medical School and Hospital; Consulting Surgeon, St. Vincent's Hospital, Bridgeport; Member of the American Medical Association; Fellow of the Academy of Medicine, New York; Member of the Medical Association of the Greater City of New York, etc., etc. New York: Rebman Company, 1123 Broadway.

The preface starts thus: "This book is intended for the general practitioner, who, having purchased an electrical outfit and desiring to make use of it, finds himself hopelessly at sea, not only in applying his various rays and currents, but in the use and care of the machine itself."

Well, the general practitioner who has been foolish enough to purchase an electrical outfit before he knew how to use one, had better be wise enough to sell it before he does too much mischief with it, because no mere book will suffice to teach him properly; more especially when "not only has no attempt been made at absolute scientific accuracy, but in many instances it has been sacrificed for the sake of presenting a clear picture to the student."

From the faulty diction, bad grammar and some errors in

spelling, such as "Finsten," "ironization," etc., one would judge that the book had been gotten up rather hurriedly; however, a little care in revision should remedy all this.

The chapters on treatment are the best part of the work, and in them the author redeems himself and gives a lot of most useful information in small compass. C. R. D.

Oxford Medical Publications. The Operations of General Practice. By Edred M. Corner, M.A., M.C., M.B. (Cantab.), B.Sc. (London), F.R.C.S. (England); Surgeon in Charge of Out-Patients at St. Thomas' Hospital and to the Children's Hospital, Great Ormond Street; Consulting Surgeon to the Wood Green and Purley Hospitals; formerly Erasmus Wilson Lecturer to the Royal College of Surgeons; and H. Irving Pinches, M.A., M.B., B.C. (Cantab.), M.R.C.S., L.R.C.P. (London); Clinical Assistant to the Children's Hospital, Great Ormond Street; Late House Surgeon and Obstetric House Physician to St. Thomas' Hospital. London: Henry Frowde, Oxford University Press; Hodder & Stoughton. Warwick Square, E.C. Can be procured from the Canada Law Book Company, 32-34 Toronto Street, at 40 per cent. discount.

This book of 283 pages fulfils the purpose for which it was written, namely, an attempt to meet a deficiency in professional education. The authors have described in detail the technique necessary for the performance of many operations which are necessary in the everyday practice of the physician or surgeon. Many of these procedures are referred to, but not fully described in the larger text-books. The work under review is to be commended more particularly to the general practitioner, who will find in it much useful information as to the best methods of carrying out various operations and procedures necessary in everyday practice.

Such subjects are dealt with as tapping the abdomen, abscesses in various regions of the body, adenoids, minor amputations, anesthesia, antitoxin injections, aspiration of cavities, boils, bunions, cellulitis, curetting, disinfection, enlarged glands, the use of the catheter, hemorrhage, pessaries, laryngotomy and tracheotomy, massage, skin grafting, asepsis and sterilization,

the use of the stomach tube, minor operations for tumors, varicocele, varicose veins, etc.

Suffice it to say that the authors have produced a book which describes these and many other operations in a manner which will serve as a useful guide to the practitioner who has occasion to perform them. The work is therefore very strongly recommended as a useful addition to one's medical library.

A. P.

Nervous and Mental Diseases. By Hugh T. Patrick and Chas. L. Mix. Chicago: The Year Book Publishers.

This is one of the practical medical series edited by Gustavus P. Head. It is not so much a text-book as a year-book, giving a summary of the latest articles by specialists in neurology, over a very wide field. Considering the smallness of the book, it is an excellent epitome of such literature, and will be a convenient aid in keeping in touch with what is being done in the various fields of research. On many topics the very latest word is presented, while other subjects which have been much before the profession are passed over all too lightly.

The subject of anterior poliomyelitis has been one of the prominent neurological subjects before the profession for the last three years, yet a single page is all that is devoted to the subject in this work.

Necessarily, the plan of the book prevents anything like completeness, but there is much here to engage the attention of the progressive physician.

B. E. M.

Medical Gynecology. By Samuel Wyllis Bandler, M.D., Fellow of the American Association of Obstetricians and Gynecologists; Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital; Associate Attending Gynecologist to the Beth-Israel Hospital, New York City. Second revised edition, with original illustrations. Philadelphia and London: W. B. Saunders Company. 1909.

The fact that the second edition of this book has been called for shows that it has ben appreciated by the profession. It certainly is of value in affording the medical practitioner much useful information regarding the treatment of various gyneco-

logical conditions by methods other than operative. At the same time the author has successfully presented very clearly the means that should be adopted in order to arrive at accurate diagnosis, and has been careful to enforce the necessity for employing operations where that is clearly the safest and best means of affording relief for his patient.

The work, which consists of some 700 pages, well illustrated, will be found of great use to the medical practitioner, who should be well informed as to the more modern methods of treating this class of disease, and he will find no treatise on the subject more complete and useful than the one at present under review. A. P.

W. B. Saunders' Company, the medical publishers, of Philadelphia and London, have just issued a new edition—the thirteenth—of their handsome Illustrated Catalogue. It contains some twenty new books and new editions, and besides numerous black-and-white illustrations, there are two color cuts of special value. We strongly advise every physican to obtain a copy—sent for the asking. It will prove a ready guide to good medical books—books that we all need in our daily work.

Surgical Emergencies. By PERCY SARGENT, M.A., M.B., B.C., (Cantab.), F.R.C.S.; Surgeon to Out-Patients, St. Thomas' Hospital; Assistant Surgeon the the Nation Hospital for the Paralyzed and Epileptic, Queen Square, and Surgeon to the Victoria Hospital for Children, Chelsea. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E.C. 1907. This book may be secured from The Canada Law Book Company, 32 and 34 Toronto Street, Toronto, at 40% discount.

This little book may profitably find a niche in the office of the busy practitioner, and would give a student much useful help.

Doubtless, if talking things over with the author, one would find so many things in common that the few disagreements would hardly matter; but when a man states, in speaking of burns, "A bad burn gives rise to little or no pain, because the patient is in a condition of collapse," it leads one to believe that the author has been coddled and carefully nurtured as a

child, or he would know that such a statement is far from the fact.

As to the necessity of early operation in appendicitis, of course all modern surgeons agree. F. N. G. S.

Age Incidence, Sex and Comparative Frequency in Disease. By James Grant Andrew, Bachelor of Medicine and Master of Surgery; Fellow of the Faculty of Physicians and Surgeons; Surgeon to the Victoria Infirmary, Glasgow; Author of "Tuberculous Disease of the Hip-Joint." Baillière, Tindall & Cox, 8 Henrietta Street, Covent Garden, London. 1909.

The comparative frequency medical and surgical disease as to sex and age is, in this book, based upon the analyses of more than 42,000 cases that were cared for in one institution—the Western Infirmary, Glasgow—and thus the statements made must be received as authentic. It is convenient and helpful from a diagnostic standpoint to have in one volume such a classification. The various diseases are arranged alphabetically, and the ages in periods of ten years. In every affection the largest number of cases treated in the different decades is given, with the percentage in each decade, and Dr. Andrew, in his careful survey, found quite a number of instances in which the decade of the average age corresponded with the decade providing the largest number of cases. The book is easily read; is very interesting, and can be put to profitable use for even a few minutes at a time without losing a thread of thought.

C. F. M.

THE MILK QUESTION*

For some little time past, Torontonians have heard a great deal in reference to a pure milk supply. The agitation that has taken place is most timely, as there is no doubt that the quality of milk that has for many years been supplied to Toronto's population is not what it should be. As medical journalists, we must congratulate those who have been instigators of this agitation, as it is bound to have good results. There is no doubt that good must follow in the wake of an investigation of this kind, and all physicians will feel an interest in the outcome. It is to be earnestly hoped that we will have soon placed upon our statute book in this Province a law giving every municipality the right to control its milk supply. We heartily approve of every medical health officer having the right to send his inspectors to the farms that supply milk to the cities, in order to see that the byres are kept in a cleanly and sanitary condition, the cows free from tuberculosis, and proper cleanliness used in the way in which the milk is transported between farm and city dairy. Just as soon as such a statute is put upon our books the milk supply of every city is bound to improve.

Erindale Farm Dairy has for years tried to use every possible care in the supply of their product, in order that they might be able to give the public the benefit of a pure article. They welcomed the investigation as held recently by the Academy of Medicine, Toronto, being the first firm to receive the seal of that institution. The Erindale Farm is a beautiful place, situated but a few miles from Toronto. The stables are splendidly lighted and ventilated, particular attention having also been paid to the drainage. The cows are examined by a skilled veterinarian once a month, and the moment that any animal is suspected of disease it is at once destroyed. The water supply for the cattle is paid particular attention to, and is quite free from all danger of pollution. Those who undertake to do the milking are insisted upon as being personally clean. The cows' udders are thoroughly scrubbed before milking, and the milk enters the cans through a very fine sieve. Messrs. Price & Sons, proprietors of Erindale Farm, receive regularly from the Milk Commission of the Academy of Medicine a certificate, and just the other day we had the pleasure of seeing their March certificate, in which it was stated that their milk contained but 500 bacteria to the C.C., a result that is exceedingly satisfactory.

* **Publisher's Department.**

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXVII TORONTO, MAY, 1910 No. 4

Original Contributions

ELECTROCARDIOGRAPHY AND ELECTROPHONOGRAPHY AS AIDS IN CLINICAL DIAGNOSIS*

BY LEWELLYS F. BARKER, M.D.,

Professor of Medicine in the Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore, M.D.

New power in clinical diagnosis comes most often through the invention of new methods of investigation. I desire to speak briefly to-night of certain rather recent applications of electrical methods of examination to the clinical diagnosis of conditions of the heart. I shall deal (1) with the method of recording the electrical currents in the form of the so-called electrocardiogram set free in the heart muscle just previous to each heart beat, and (2) to a method of recording the heart sounds in the form of the so-called electrophonogram.

It has long been known that when an irritable structure like muscle undergoes excitation certain electrical changes take place at the point of stimulation, which increase the electrical potential there as contrasted with the remaining portion of the muscle which is at rest. If an electrode be applied to the excited point of the structure and another to some more distant resting point in it, and these be connected with a galvanometer the direction and intensity of the electric current produced in the muscle can be directly measured. From the form of the curve obtained

*Read by invitation before the Academy of Medicine, Toronto, Jan 4th, 1910

inferences may be drawn regarding the character of the excitation occurring in the irritable structure. Physiologists a half a century ago demonstrated that "action currents" of the type mentioned arise in the heart muscle. Exposing the heart of animals, they were able to demonstrate the occurrence of such currents in the heart muscle during each cardiac revolution.

A happy idea originated with the English physiologist, A. D. Waller. He saw the desirability of being able to investigate the electrical currents arising in the hearts of human beings and of uninjured animals. It occurred to him that, since the heart is surrounded on all sides by conducting media, in all probability the changes in potential occurring in the heart would also lead to changes in potential in the neighboring tissues of the body, and that by applying an electrode to a portion of the body on the right and another electrode to a portion of the body on the left the action currents due to differences of potential between the base of the heart and the apex of the heart could be led off and measured by introducing a galvanometer into the circuit between the two electrodes. At the time of Waller's experiments the most accurate galvanometer was the mercury-electrometer (the best form of which is Lippmann's), and Waller obtained curves called electrocardiograms from the human heart by the use of this instrument. Owing to the inertia of the mercury, however, the most delicate changes in the electrical potential could not be recorded, and even those changes recorded had to undergo correction by mathematical calculation in order that a true form of curve could be obtained.

An enormous advance in electrocardiography was made in 1903, when the Dutch physiologist, Einthoven, devised his so-called string galvanometer. This is a truly remarkable instrument, and one of the most delicate instruments of precision yet introduced into physiological or clinical work. It is based upon the principle that an electric current passing through a magnetic field undergoes deflection in one or the other direction, according to the direction in which the current flows. Einthoven stretches a most delicate thread (fastened at two ends like the string of a musical instrument) midway between the poles of a powerful magnet and connects the ends of the thread by wires with the electrodes, which lead off the action current from the surface of the body. As the electrical changes take place in the heart

this thread oscillates from side to side. The thread, which is made either of quartz with a silver coating or of platinum, is extremely delicate, being only one-third or one-half the thickness of a red blood corpuscle, and is so light that it cannot be weighed. A magnified image of the thread is thrown by means of a projection microscope upon the slit of a photographic recording apparatus, strongly illuminated by an electric light. A moving photographic film records the oscillations of the string in the form of a curve of which the ordinates correspond to the intensity of the current in one or the other direction, while the abscissa marks the time. I shall not enter at this time into the details of the construction of an electrocardiographic station, as I deal with the subject fully elsewhere, but I may say that, thanks to the researches of Einthoven and to the mechanical ingenuity of Edelmann in Munich, it is now a comparatively easy matter to set up an electrocardiographic station in a hospital or in a physician's office, and once such a station has been organized it is a relatively simple matter to obtain satisfactory electrocardiograms from normal and abnormal hearts. In Fig. 1 the galvanometric part of Edelmann's electrocardiographic station is illustrated.*

THE TYPICAL ELECTROCARDIOGRAM.

The apparatus is so arranged that upward waves are recorded on the photographic curve when the region of the base of the heart is electro-negative as regards the apex, or when the right side of the heart is electro-negative as regards the left; while downward waves on the curve correspond to times when the apex of the heart is electro-negative as regards the base, or when the left side of the heart is electro-negative as regards the right. The term electro-negative here is used in the sense of the negative pole of a galvanic element; that is to say, when the base of the heart is electro-negative as regards the apex, the action currents will pass in the heart muscle itself from the base of the heart toward the apex, while in the outer part of the circuit the action current will pass from the region of the apex of the heart through the galvanometer toward the base of the heart.

*Only eight of the twenty illustrations accompanying the article could be published, but it is believed that these will be sufficient to make the nature of the methods discussed, understood.—Editor

Examination of curves obtained from normal hearts are very similar, though not always identical in character; they are so similar that it is possible to speak of a typical electrocardiogram, but it is better to use the word *typical* rather than the word *normal,* since under normal conditions there may be various slight deviations from the type. I am throwing on the screen a so-called typical electrocardiogram (Fig. 2.). You will notice that there are three principal waves in an upward direction and two slight waves in a downward direction. These five waves Einthoven has designated by the letters P, Q, R, S, and T. The first upward wave, P, corresponds to the time of excitation of

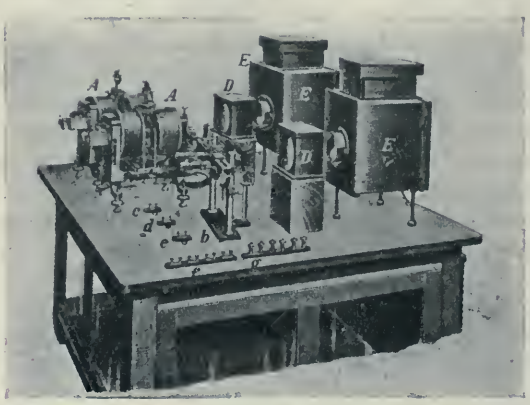


Fig. 1 (after Edelmann.)

the two atria (or auricles) of the heart at the base. Accordingly the oscillation of the string yields an image which is recorded as a wave above the line. Q is a very slight elevation below the line, indicating a slight negativity of the apex as regards the base, but this is immediately followed by a very large excursion or wave, R, above the line, indicating an intense difference in potential in favor of the base or of the right half of the heart. It is of short duration, however, and is followed immediately by a second slight negativity of the apex indicated by the shallow depression, S. After this there is a stretch without oscillation of the string. This does not mean that at this time the heart muscle is not excited, but it probably indicates that during this

period the potential changes toward the base of the heart exactly neutralize those occurring toward the apex of the heart. Finally there is a third marked wave upward of less excursion than the wave R, but lasting longer. This wave is designated T, and occurs at the end of the ventricular excitation. Indeed, the whole extent of the curve between the beginning of Q and the end of T belongs to the ventricular excitation of the heart. The stretch between the end of P and the beginning of Q corresponds to the time required for the excitation to spread from the atria of the heart to the ventricles, and therefore represents what is known in cardiac bibliography as the As—Vs interval. The long stretch following T and lasting until the occurrence of the next P represents the pause of the heart's activities between two cardiac revolutions. One sees at once how sharply the excitation

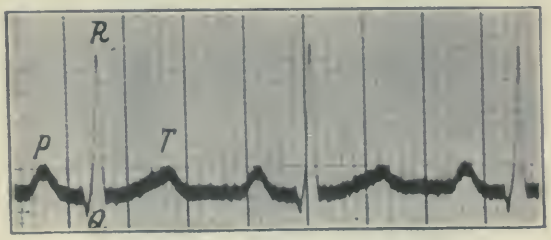


Fig 2 (after Samojloff.)

of the atria (or auricles) is here marked off from that of the ventricles, and one learns also of several different happenings in the cardiac muscle during ventricular excitation. When one recalls that these electrical changes occur simultaneously with excitation and before contraction of the heart muscle it becomes clear that we have by this electrocardiographic method a means of examining the heart from an entirely new standpoint, yielding results wholly different from those obtainable by any of the ordinary clinical methods of examination.

It makes a great difference from what parts of the body the electrical currents originating in the heart are led off. Waller found that certain parts of the body were "favorable" and others were "unfavorable" for leading off the current. In Figure 3 a diagram of his ideas regarding the distribution of potential in the tissues of the body has been reproduced. Ac-

cording to it any portion above and to the right of the oblique plane through the middle of the heart could be used for leading off the potential from the base, while parts below and to the left of that oblique plane could be used for leading off the potential of the apex. It was customary for a time to use the two hands as points of derivation. They were simply immersed in a stone jar containing salt solution and the electrodes. Experience has shown that Waller's scheme is not entirely accurate, and there are marked differences with different methods of leading off the current. Three principal methods of derivation are now in general use, namely:

I. Leading off from the two hands and forearms.

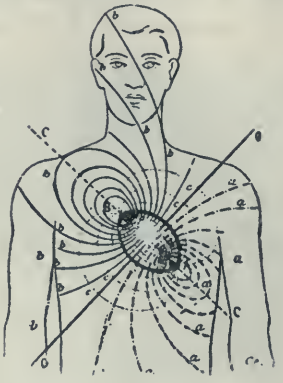


Fig. 3 (after Waller.)

II. Leading off from the right hand and forearm and the left leg.

III. Leading off from the left hand and forearm and the left leg.

In Figure 4 is shown a man in the third position mentioned. For clinical work, if only one electrocardiogram is taken, it is best to use derivation II., but it is highly desirable that three electrocardiograms shall be taken in each case (D-I., D-II., and D-III.) for comparison with one another. In any event, when an electrocardiogram is recorded or published, the mode of derivation should be definitely noted. In animals the best derivation is from the oesophagus and rectum, especially if silver

electrodes coated with chloride of silver, like those used by Max Cremer, be employed.

Normal curves are influenced by various conditions. It is best to conform to certain definite rules in taking an electrocardiogram. The patient should be comfortably seated in a relaxed position. The frequency of the pulse and respiration should be noted, and it is desirable that a pulse tracing be recorded simultaneously with the electrocardiogram for control.



Fig. 4 (after Einthoven.)

(Fig. 5.) This is an easy matter, as one can arrange a lever extending from a tambour, which will oscillate in front of the slit of the photographic recording apparatus to record the pulse. Similarly a time marker connected with a chronometer may be made to register one-fifths of a second at one edge of the film. It should be kept in mind that dislocation of the heart in the thorax from pleural effusion or other cause will alter to a certain extent the form of the electrocardiogram (Hoffmann).

The wave P shows only slight variations in health, but it

becomes higher and broader and sometimes "splintered" when the atria or auricles are hypertrophied, especially in mitral stenosis and sometimes in emphysema. Total absence of the wave P may be noted in cases of atrial paralysis. Hering has demonstrated this in a patient with the pulsus irregularis perpetuus. If P should be absent in D-I. one should demonstrate its absence, also in D-II. and D-III., before concluding definitely that the atrium is paralyzed.

The wave R, the most marked wave of the whole typical electrocardiogram, is made even higher by bodily exercise. It is normally well marked with D-I. and D-II., but may be absent or negative with D-III., in which event S is usually prominent. When the heart is beating forcibly, and especially when the right

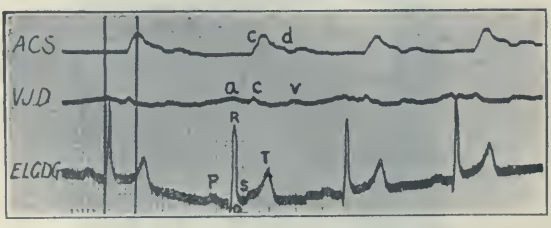


Fig. 5 (after Einthoven.)

ventricle is hypertrophied, R is higher than normal. (Fig. 6.)

The downward wave S, often absent normally with D-I., is usually easily visible in D-II. and D-III. It is especially marked in D-III. when the left ventricle is hypertrophied, as is well shown in cases of aortic insufficiency and chronic nephritis. For a time it was thought that this wave was especially developed in neuropathic or neurasthenic individuals, especially in those who presented signs of infantilism or feminism; indeed Kraus actually speaks of S as the "neurasthenic wave." Later studies, especially those of Nicolai and Simons in Oppenheim's clinic, demonstrated that the S wave may be absent even in outspoken neurasthenic patients. For the present its significance is uncertain, though its exaggeration in D-III. probably always indicates hypertrophy of the left ventricle.

The T wave has attracted a good deal of attention from those who have worked with electrocardiograms. Thus far it seems to have been certainly made out that in healthy hearts

T is always present. After exercise in normal individuals this wave is exaggerated. In old age the wave is smaller than normal or may be absent, and especially in cases of marked cardiac debility and in degeneration of the myocardium it may be absent, doubled, negative or "splintered."

In Figure 7 is shown one of Kraus and Nicolai's tracings with total absence of the T wave. The patient suffered from myocardial disease.

Figure 8 is another of their tracings in which the wave is markedly splintered. Just what the significance of such splintered waves is I do not know. It seems likely that the tremor



Fig. 6 (after Einthoven.)

of the hands of feeble persons may be sufficient to give such a splintering of the curve. One curious fallacy in the way of "splintering," which must be guarded against, is that which occurs from induction in electrocardiograms taken in a room in which an alternating electric current is present. Some curves have been published as pathological splintering, which on close examination reveal a definite number of oscillations per second corresponding exactly to the alternating current. It is essential that no alternating current machine shall be present near an electrocardiographic station.

While the wave T is present in normal cases and is often absent in myocardial disease, still a number of cases of serious lesions of the heart muscle and of the great vessels have been reported in which a large T wave existed. It is interesting also to notice in published reports that the T wave may be absent in one derivation and present in another. A good example of a large T wave in an enfeebled heart will be seen in Figure 9. This represents an electrocardiogram taken by Hoffmann from a patient suffering from the tachycardia of Basedow's disease. Another feature of interest in this tracing is the shortening of the electrical ventricular systole.

A great deal of interest attaches to the forms of the electrocardiograms which are obtained in the arhythmias of the heart in which extra-systoles occur. As a result of electrocardiographic work, we can for the first time be perfectly sure that

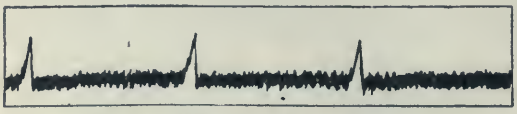


Fig. 7 (after Kraus and Nicolai.)

the nature of excitation, and therefore, in all probability, of contraction, in an extra-systole is wholly different from that of the normal heart beat. These extra-systoles yield the so-called "atypical electrocardiograms." In Figure 10 two of Hoffmann's electrocardiograms of extra-systoles are given. The upper one was obtained by leading off the current from the two hands (D-I.), the lower one by leading off the current from the left arm and the left leg (D-III.). The extra-systole shows an entirely different curve from that of the normal heart excitation. Another of Hoffmann's tracings (Figure 11), which is of unusual interest, was taken at the beginning of an attack of paroxysmal tachycardia. The upper part of the tracing represents D-II., the lower part D-III. It will be observed that the curves are of atypical electrocardiograms and that, therefore, in this particular instance of tachycardia the heart beats consist of contractions of the type of extra-systoles. Note how very different this tachycardia is from the tachycardia of Basedow's disease illustrated above. Whether atypical electrocardiograms are

common in instances of paroxysmal tachycardia remains for further investigation to clear up.

From the studies of Kraus and Nicolai, Einthoven and Kahn a good deal of light has been thrown upon the nature of the atypical electrocardiograms. It turns out that artificial stimuli applied to the walls of the ventricles of experimental animals yield atypical electrocardiograms; that is to say, the contraction resulting from such stimulation corresponds to that of extra-systoles which occur spontaneously, and not to normal heart-beats. Kraus and Nicolai thought that they could distinguish an electrocardiogram of the right ventricle from one of the left, and certain it is that artificial stimulation of the right ventricle yields a wholly different atypical electrocardiogram from that which results from stimulation of the left ventricle. In Figure 12, I have reproduced some of Kahn's curves, taken from experimental animals. Stimulation of the base of the right ventricle

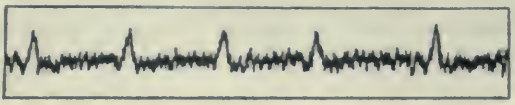


Fig. 8 (after Kraus and Nicolai.)

and of the apex of the right ventricle yield very similar curves, while stimulation of the apex of the left ventricle yields a curve in which the waves are in the opposite direction. It seems justifiable, therefore, to assume that in extra-systoles, yielding atypical electrocardiograms, when the first wave is up and the second down, the extra-systole has its origin in the right ventricle, while when the opposite is the case (first wave down, second wave up) the extra-systole has its origin in the left ventricle. In Figures 13 and 14, I reproduce two curves, taken with the help of Drs. Hirschfelder and Bond in our clinic at the Johns Hopkins Hospital, of extra-systoles occurring in the heart of a boy suffering from mitral disease. It will be noticed that the ordinary beats of the heart show good P, R and T waves. The P wave is perhaps a little exaggerated owing to the hypertrophy of the atrium. The character of the atypical electrocardiogram accompanying the extra-systole indicates that, in this boy, the extra-systoles originated in the right ventricle.

I now come to a form of cardiac arhythmia, in which the electrocardiogram is most illuminating; I mean that in which there is complete dissociation between the activities of the atria and the ventricles, due to interruption of the fibres of the His bundle—the so-called heart block which occurs in the Stokes-Adams syndrome. Electrocardiograms of such cases have been taken by Einthoven, by Kraus and Nicolai, and by Pick. For convenience sake I am reproducing Pick's curves. In Figures 15 and 16, two atypical electrocardiograms from a normal person are shown, the one obtained by leading off the current from the two hands (D-I.), the other by leading off the current from the right arm and the left leg (D-II.). Both these curves show characteristic P, R and T waves. In Figure 17, an electrocardiogram of the heart block case is shown (taken by D-I.) and in Figure 18, another electrocardiogram (taken by D-II.) from

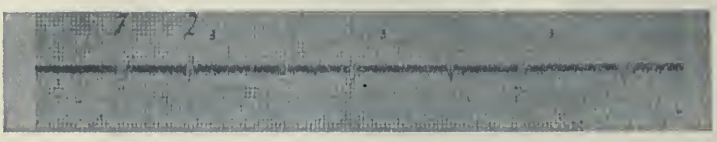


Fig. 20 (after Einthoven.)

the same case. Observe how elegantly the dissociation between the atria and the ventricles is shown here, even better than by the phlebogram, as compared with an arteriogram, our only method hitherto for making satisfactory diagnoses in such cases. The patient from whom this tracing was taken by Pick was a man of 43, whose pulse rate went down after a pericarditis and endocarditis to 30. He kept at work for a time, but one day had suddenly as many as 120 attacks of syncope within twenty-four hours. He recovered from the fainting spells, and has had no attacks of syncope for four years, though his slow pulse continues. It will be seen that the atria are excited three times to one excitation of the ventricle, corresponding to three pulses in the jugular vein to one in the carotid artery. The complete independence of the ventricular excitation from that of the atrial excitation is well illustrated in Figure 18, in which, in one instance, the P wave of the atria fuses with the R wave of the ventricle to form a single wave.

I hope I have given you examples enough to demonstrate beyond doubt that the electrocardiogram will be of definite importance in the recognition of the electrical processes which go on in the heart muscle. That certain practical results in diagnosis and in indications for therapy will come out of these studies I think we can feel sure. It would be a mistake, however, to think that electrocardiography can take the place of sphygmography, fluoroscopy, blood-pressure determinations or the ordinary methods of physical diagnosis. It is only another method for forming a judgment regarding the heart, with especial reference to the condition of the heart muscle. It will, I feel sure, be found to be an important supplement to methods now in use, yielding confirmatory evidence in many ways, and sometimes giving information regarding the heart which can be got in no other way. I should like to warn, however, against the drawing of too hasty clinical inferences from the study of electrocardiograms. A very large amount of work must be done before we shall be in a position to speak very positively regarding the significance of the different waves occurring during the ventricular portion of the electrical systole.

Before closing these remarks, I wish to throw upon the screen a couple of electrocardiophonograms. A suitable method for registering mechanically in some way the sounds heard over the heart has long been desired. Thanks to the combination of a vibration-free microphone with Einthoven's string galvanometer, this is now possible. In Figure 19, I have reproduced an electrophonographic tracing, taken in our clinic in Baltimore with this instrument. The oscillations of the string due to the first and second sounds are well shown. In Figure 20 is reproduced one of Einthoven's electrocardiophonograms, in which in addition to records of the first and second sounds, that of a third protodiastolic sound is evident. This third sound of the heart is so commonly met with in young people, as my colleague, Professor Thayer, has shown, that it may be properly regarded as a normal third sound. It can easily be heard with the stethoscope if one takes the trouble to listen for it, in a very large proportion of young boys and girls, and in many young adults.

It seems probable that the electrocardiogram will be more helpful, in both physiological and clinical work, than the elec-

trophonogram, though the latter will also find its place. It has already been found useful to make simultaneous electrocardiograms and electrophonograms. By the use of a large string galvanometer for the electrocardiogram, and a smaller one for the electrophonogram, both curves may be registered upon the same photographic film simultaneously, and one can then compare the relation of the waves in the electrocardiogram with the times and durations of the heart sounds.

NURSING PEOPLE OF MODERATE MEANS AND THE POORER CLASSES*

BY JOHN N. ELLIOTT BROWN.

Superintendent General Hospital, Toronto.

Miss Dickson and Young Ladies of the Graduating Class,— About two years ago, the writer made some inquiries of those members of the medical profession in Toronto, whose practice is largely confined to the middle and poorer classes of people, to what extent their patients were nursed by hospital graduates. The result of this investigation showed in part:

First, that only a small proportion of people of moderate means were provided with trained nurses;

Second, that it was desirable that they should be so provided;

Third, that the work was, in part, done by district nurses, nurses belonging to the Victorian Order, "experienced nurses" and by occasional graduate nurses;

Fourth, that the medical profession were in favor of hospital training schools sending out nurses to such families, such work to constitute part of their training, a fee being charged commensurate with the work done;

Fifth, that among this middle-class folk there is a large field for nurses who are not as fully trained as the graduates of training schools with a three-year course.

Since then I have made some similar inquiries of superintendents and members of the medical staffs of some of the leading hospitals of some of the other cities of Canada and of the United States, the results of which are briefly set down herewith.

One of the New York physicians states that in New York the large hospitals require all their undergraduates and some graduate nurses for their own work, so could not spare them for outside services. After graduation there is such a demand for nurses at some seasons that it is sometimes an impossibility to secure them from the leading hospitals. They make no reductions in charges,

*Read at the first graduation exercises of the National Consumptive Sanatorium at Weston, Ont., October, 1909. Also presented in part at a meeting of the Training School Committee of the American Hospital Association, and published in part in the "International Hospital Record."

and find so much work that many specify the types of cases they will attend, and many refuse tenement work, and some refuse male patients. The recent graduates are especially in demand. They are unwilling to work at reduced rates. It is the older graduates who accept salaried work and less than $25 a week. The only remedy would be to shorten the course of training to two years, leaving out some of the theoretical work, and increasing the number of graduates until the over-supply would make them willing to work at lower prices. They are now strongly commercial. They expect physicians to treat them free, or at reduced rates, yet charge physicians $25 per week for nursing in their families.

Dr. Himmelsback, of Buffalo, says that the needs of the middle and lower classes in that city are supplied in Buffalo by "practical nurses," or undergraduates, at smaller cost. His suggestion is that hospitals having a three or four-year course might have two courses instead of one—the one a short term, say from one to two years, which would include the basic principles of nursing, and also include medical bedside nursing and obstetrics; the long term to include a special training in the present-day surgical nursing.

In Providence, R. I., they have a class of nurses who go under the general name of "experienced nurses"—usually a misnomer—middle-aged or even elderly women who have picked up knowledge during the many years of unskilled nursing; young women who have taken partial courses in training schools and have been forced to give it up for some reason or another, correspondence schools or Chautauqua nurses, whose knowledge is almost wholly theoretical; young women who have gotten their lectures at the Young Women's Christian Association, supplemented by practical work in private families at the same time. This last class are considered the best of the four. Some of them are excellent nurses. Dr. Cooke, of that city, thinks that no hospital training school could wisely attempt to train a grade of nurses theoretically inferior to their regular graduates, as it would provoke resentment on the part of the "regulars" and they would look down upon the "specials." It would tend to lower the standard for the "regulars" as a class, who are already (in the smaller hospitals or at least in the hospitals of many cities) not anywhere near standard even at graduation. He believes that training through suitable instructors—by the Y. W. C. A.—the best solution of the problem.

Dr. Partridge, of Providence, thinks hospitals have sufficient to

do to care for the poor and ought not to supply the middle classes with nurses.

Dr. George E. Blackham, of Dunkirk, N.Y., chairman of a training school committee, who has given special study to this question and has contributed an article on "The Place and Work of the Smaller Hospitals and Training Schools," has the following views:

"I am altogether in favor of allowing pupil nurses to do out-patient work after one year of training, the cases being, of course, properly selected.

I am in favor of this from the standpoint of the pupil nurse, of the hospital, and of the public.

It gives the nurse a training which she cannot possibly obtain in the hospital, and in the line of the work which she will be chiefly called upon to do, unless she is one of the minority who devote themselves to institutional work.

It is, and must be, of advantage to the hospital, in that it helps the revenues, and thus provides for wider usefulness and tends to spread a knowledge of what the hospitals are doing and the excellence of their ways of doing it, and thus allays the prejudice against them which is still unfortunately prevalent among many people.

It is for the benefit of the public, in that it allows the large class of people of moderate means to have nursing attendance which, while not equal to that given by good graduate nurses, especially by those who have had considerable experience in private nursing after graduation, is immeasurably superior to that given by the so-called "practical nurses," who are too often women of little education, and have neither knowledge of nor respect for the principles and practice of antisepsis, which are the most important things for a nurse to know, to believe, and to do. The under-graduate nurse has at least learned the rudiments of these things, and has been taught that she must obey and co-operate with the attending physician, while the "practical nurse" too often, out of the abundance of her ignorance, thinks she knows it all and is quite likely to view elaborate, or simple, antiseptic measures with contempt, to neglect them when the doctor is not present and generally to work against rather than with him.

If the hospitals are permitted to send out pupil nurses to suitable cases, the pupil nurse will get much-needed training in private nursing, which she can get in no other way, the hospital will get

some revenue, and the public, or that part of it which cannot afford to pay the reasonable fees of graduate nurses, can get valuable nursing service at a cost within their means, and learn to appreciate the value of special training in a nurse and be more willing to employ the graduate nurse when circumstances make her more skilled services imperative or their own financial conditions will permit."

One New York doctor suggests that training schools might graduate two classes of nurses—trained, and more or less fully trained.

One of the most prominent physicians in Montreal writes: "I would say with the onset of any serious sickness I appreciate highly a regularly trained nurse, and the majority of my patients secure one. At the same time, I think the charges are too heavy for the head of a family if he is drawing a limited income. I am strongly of the opinion that there should be, if practicable, a second grade of nurse, which might be employed in the less serious cases; nurses, say, of one year's experience, who would be content with a more moderate pay. The difficulty in the case lies with us in the fact that nurses are ambitious—are anxious to obtain the highest rates, and a few are desirous to be doctors as well as nurses.

Miss Aiken says: "The plan I have to offer for your consideration is the establishing in every county of a register or directory, in which every woman who nurses for pay is required to register every year in some class—four classes to be established. First-class certificate nurses (county certificates) to hospital graduates who have had at least two years' training, including experience and training in medical, surgical and obstetrical work.

"Second-class certificates to nurses who have had at least one year of hospital training or less than two, and who pass the second-class certificate examinations or who have had four years of experience in private nursing, pursued a systematic course of study, etc. This class to charge not more than $15 a week.

"Third-class certificates to nurses who have had two years' experience in private nursing, pursued the county course of study for third-class nurses, etc. This class to be limited to $10 a week.

"Fourth-class certificates or county permits to those who are of good moral character and reliable women, but without training, and who have pursued no study and passed no examinations. This class to be limited to $8 a week. Each class to state on business

card the grade or class in which they are registered. A registration fee of one dollar a year from every nurse practising in the county would easily provide for a county registrar to attend to such work. Every class of patient would be provided for. Nobody would be prohibited from nursing who was of good moral character and reliable, but they must, if they make a business of nursing, go into one of the classes. Provision should be made so that those who started in at the bottom could reach the second grade. Thus there would be an incentive to improve, which is now absent. The one who can put up the biggest bluff now is the one who will get most money, whether she knows anything about nursing or not.

"I believe this plan is a feasible thing providing the doctors will take it up and recognize the classes. Personally I think it would be a good thing to have such a directory under the auspices of the county medical society, to which reports and printed lists of nurses would be furnished every year. The doctors know these women, employ them, are disgusted with them thousands of times, while they know they are a necessity. If the doctors of any county demand that nurses be classified for public safety and to increase efficiency, the nurses will meekly fall into line. Without the co-operation of the doctors this can never be accomplished."

Dr. J. A. Scott, of Philadelphia, says that there are in that city two associations who train nurses in the rudiments, such as the taking of temperature, bathing, giving enemas, etc. These nurses are supplied to patients at from $8 to $12 per week. He believes that training schools could give this sort of training in a much better way, more thoroughly and more satisfactorily than do the associations mentioned, the latter being dependent on the dispensary and poor patients, while the hospitals have material always within reach.

Complaint is made, however, that the nurses of this school go out and demand full pay, as though they were nurses who had taken a full and regular hospital course.

Another correspondent from Philadelphia reports that there is a school of nurses there which gives a ten weeks' course, and that one hospital is giving a "cadet course" of one year (probably the same one as mentioned by Dr. Scott), the graduates from which should charge from about $10 to $12 per week. It is found, however, that they often charge the same prices as graduates of two or three-year schools, which causes ill feeling.

Dr. Alice Seabrook, of the Woman's Hospital, Philadelphia, says: "We send out our pupils to a limited extent in their third year. No one is out more than twelve weeks and the charge for their services is $12 per week. To very poor and needy people in our district we sometimes send a nurse temporarily without charge. It is difficult to do any of this work, however, because of the instant demand for similar assistance, a demand far beyond our power to supply."

The Germantown Hospital, Philadelphia, employs a graduate nurse for doing district nursing among tubercular patients. The rules of the hospital allow it to furnish undergraduates to the middle classes, but their supply of nurses is not sufficient to permit them to do so. Their correspondent suggests short courses of training and a certificate of "qualified assistant" nurse.

St. Luke's Hospital, New York, supplies a district nurse for poor people only.

The Beth Israel Hospital, New York, requires all its nurses for hospital work, but says that in the vicinity of the hospital the poorer classes receive some nursing from the Nurses' Settlements.

The Cook County Hospital, Fairmont, W. Va., sends out undergraduates to people in moderate circumstances at $15 a week.

From what I can learn the three hospitals which seem to be giving the most effective service along this line are the Newton, Mass., Hospital and the City Hospital, Worcester, Mass., and the Massachusetts Homeopathic Hospital, Boston. I take the liberty of quoting from a letter of Miss Riddle, the superintendent of the Newton Hospital, as follows: "I will say that the pupils of this school do the district nursing in Newton under the supervision of one of our graduates. We keep two pupils out all of the time, who, with the supervisor, make three nurses for a city of about forty thousand people. I enclose a sheet which will tell you something of the work they did in 1907. An association of ladies, called the Newton District Nursing Association, meets *all* expenses. They even pay us the board of the nurses and the little allowance also which we make them. We also send out our pupils in their third year for a limited experience among the people of the middle class. For this we receive $12 per week for their services. *We have to be very careful in the management of this, because the people who can afford more are always trying to engage their services, because of the less expense.* We have to depend upon our doctors for know-

ledge of the cases, and I may say we rarely supply a nurse to a family direct, but almost always through the doctor, who never deceives us but once. We insist that the nurse returns to the hospital for all classes and lectures when out on such a case, and we never send them out of Newton. Most of the work thus done is obstetrical. I do not believe in this last method of training for nurses, excepting to a very limited extent, but since these people need the care and no other means are at hand we ought to supply it. It can never do much harm to our nurses and our hospital, because we are not a large enough city for them to be swallowed up in. We can keep track of them. I believe great good is being done in this way, because a sympathy is established between the public and the hospital which could not be done in any other way."

The report of the Association says: "Few realize the importance of this work, and the wide field the nurses have to cover. But the benefit received by the patients who are visited and treated in their own homes is inestimable. Many of the cases are patients who could not be admitted to the hospital, and except for the welcome visits of the district nurse, would often suffer from want of proper care. Miss Riddle speaks in most enthusiastic terms of the benefit derived by the nurses from this outside work, so necessary to one who is training herself to meet all kinds of patients, in different surroundings. Ten nurses, in the second year of training, have been instructed in this work and with the superintendent have made 5,536 calls on 316 patients."

Dr. Mann, of the Homeopathic Hospital, Boston, writes: "We send out two physicians and two pupil nurses to answer calls from poor people. Last year the physicians made over 9,000 calls, the nurses about 4,000. This work is in connection with the out-patient department. Patients on what we call the district—that is, anywhere within a radius of a mile of the hospital—send in to the out-patient department calls for physicians. The district is divided into sections and each physician has a section and answers calls coming from that section. Physicians are really students in their senior year at the medical school, which is next door to the hospital, but entirely independent of the hospital. They are appointed for periods varying from three months to a year. Those who agree to serve a year are given free board and lodging. Those who only come for three months are given their room only. The work consists of ordinary medical work, with a good deal of obstetrics. The

physicians, as they see the cases, decide which ones need the services of a nurse, and leave such with the clerk at the O. P. D., where the nurse calls for them every morning."

Dr. Howell, of the City Hospital, Worcester, says: "The only attempt to furnish nursing for the poor and middle classes in Worcester is that made by the Worcester Society of District Nursing. This society cares for both classes. When the patient is poor, no charge is made. If the patient has some means, he is expected to pay something for the nurses' time. For the past two or three years we have been furnishing nurses to the District Society. At first we furnished four for one-half of each day, but at present we only furnish two. This work we regard as part of the nurse's training; she is required to take it. We make no charge to the District Society for the services of our pupil nurses."

The correspondent from the Latter-Day Saints' Hospital, Salt Lake City, Utah, writes; "Connected with the Church of the Latter-Day Saints is a relief society, which takes care of the poor in the community very satisfactorily by sending out undergraduates. Each ward has its own relief society, which keeps in close contact with all the people of the community. In this way the supply for the better class and the poorer class is very satisfactorily met. We do not think there is a city in the United States that has better facilities, or more complete and systematic arrangements for taking care of all classes of people."

In Albany there is established what is called The Albany Guild for the Care of the Sick.

Applicants are those who do not wish to take a hospital training, either because of age limit or for various other reasons.

Two years, preceded by *three months' probation* to determine the interest in and adaptability to the work.

The salary begins with $10 per month, and increases gradually to $20 towards the end of the training.

Lodging is provided, unless the nurse has her own home in town. When she is on a case, her board and laundry are provided by the family where she is in attendance, otherwise she is responsible for her own board and laundry.

The assistant nurse receives her training and experience in the homes of patients of limited means, under the supervision and instruction of a hospital graduate nurse of the Guild staff who is responsible for the case.

In the intervals between cases she acquires experience in district work in the homes of the poor, where she visits with the graduate nurse; she acquires experience in minor surgery at dispensaries, where she assists the graduate nurse.

This practical instruction and experience is supplemented by a course of lectures from physicians of recognized standing, extending throughout the two years.

The assistant nurse must be ready to follow implicitly all orders of the physician, and all orders and instructions of the graduate nurse in charge.

At the end of two years, if the training and examinations have been passed satisfactorily, the Guild pin is given, and a certificate conferred which limits the charge for services to $15 per week, and entitles the nurse to register as a certified nurse of the Guild. She also has thereafter the privilege of all lectures and classes held at the Guild House.

The Young Women's Christian Association of New York carries on a work among the sick, the character of which may be gathered from the following:

Trained Attendance on the Sick.

The purpose of this department is to train women to be attendants capable of caring for convalescents, feeble or elderly persons, and sub-acute and chronic cases.

There are many intelligent women who are unable to give to study the length of time required to become a trained nurse; and there are many persons who, for economic reasons, are obliged to do without trained assistance in times of illness. It is to enable such people to obtain better aid at a moderate compensation, and to offer an honorable means of livelihood to women, that this department is established.

Applicants for admission to the course for attendants must understand that the position of an attendant is not that of a "trained nurse," and they cannot hope to become trained nurses by taking this course alone. The course of study for a "trained nurse" covers at least *two years,* while this course continues only *eleven weeks.* An attendant cannot charge or expect to receive as a "trained nurse," but, on the other hand, she cannot be expected to assume the latter's responsibilities.

From the above it will be seen the medical profession feel that there is need of nurses who are as competently trained as possible to undertake the work of nursing the sick who are found in the homes of the average well-to-do families, as well as the sick in the homes of the poor.

That various philanthropic bodies are working very commendably in the direction of supplying nurses to the poorer classes generally.

That there is an evident desire on the part of many hospitals to assist in doing work among the sick outside of the hospital; as is evidenced by the fact that through their training schools they are sending out pupil nurses under direction and supervision of senior nurses or physicians, by which they are greatly increasing their usefulness, not only to the poor people, but to the people of moderate means as well.

A TEST FOR THE DIAGNOSIS OF GENERAL PARALYSIS OF THE INSANE

BY GEORGE W. ROSS, JR., M.D., TORONTO.

THE diagnosis of general paralysis of the insane is for two reasons a more important matter than the diagnosis of most forms of insanity. On the one hand, thanks to the clinical observations of Pilcz, Kraepelin, and a host of other workers, with the pathological researches of Nissl and Alzheimer, we have a clearer picture and more exact knowledge about the course and nature of the disease than about almost any other psychosis, so that we can foretell what events are liable to occur in it, and take measures to guard against them. On the other hand, the prognosis is more fatal and the lethal termination more rapidly reached than in any other form of insanity, so that it is important to recognize the condition as soon as possible, and to get the patient's affairs arranged on the basis of that knowledge. Although in a pronounced case the clinical picture is one of the sharpest in the whole of medicine, yet in an early or non-typical case the difficulties in diagnosis are often exceedingly great. So much is this the case that it is found in asylum practice that the majority of the patients are admitted either with an erroneous diagnosis, or else comparatively late in the course of the disease. Hence the additions to our knowledge that, of late years, have accrued from a study of the cerebro-spinal fluid in the disease, have been welcome and valuable aids to the practitioner. These newer laboratory methods, of course, can never replace accurate observations of the well-known physical signs of the condition any more than Widal's test has replaced the employment of physical examination in the case of typhoid fever, but a knowledge of them is of the utmost importance when we have to deal with obscure and doubtful cases.

Before detailing some personal researches it would be well to review very briefly our present knowledge concerning the cerebro-spinal fluid in general paralysis, and this is best done, perhaps, by mentioning the various points in the chronological order of their discovery.

The first step in this connection, and still one of the most im-

portant, was the discovery made in 1900 by Ravault, Widal and Sicard, that a lymphocytosis in the cerebro-spinal fluid is one of the most constant accompaniments of both general paralysis and tabes. Many forms of cells are found, the most significant being large mononuclear lymphocytes and plasma cells. When in a non-febrile malady the lymphocytosis is very pronounced, then it may be regarded as practically pathognomonic of general paralysis. The cell increase is greater at the onset of the disease, a fact that obviously enhances its value in diagnosis.

A year later the discovery was made by Achard, Loefer and Lanbry, that considerable quantities of proteid are to be found in the cerebro-spinal fluid in general paralysis, and, to a less extent, in tabes. As the present paper is chiefly concerned with this question, consideration of it may be conveniently postponed for the moment, and it will suffice here to mention the well established facts that in normal cerebro-spinal fluid the quantity of proteid is but minimal, that in the disease in question, the increase is mainly an increase in globulin, and that this increase is not always parallel with the degree of lymphocytosis, tending on the whole to develop later than this phenomenon.

The next discovery was the startling one made by Wassermann in 1906, that the cerebro-spinal fluid in general paralysis contained substances which when combined with the syphilitic virus have the power of inhibiting hemolysis. It will be remembered that in 1900, Bordet demonstrated that in various processes, of which hemolysis may be taken as a type, three bodies are essential components. These are, firstly, the antigen, or substance that has been destroyed, bacterium, blood cell, etc., as the case may be; secondly, a non-specific substance, or complement, found in all blood sera, and, thirdly, a specific substance, or amboceptor, found only in the serum of an individual that has been previously injected with the corresponding antigen; the amboceptor being thus evoked as a response to the foreign body. It follows that if two of these three bodies are present in a fluid and cytolysis does not take place, it must be due to the absence of the third one; thus if the antigen is not dissolved on being added to its corresponding amboceptor the complement must be missing. In this way we can test for the presence or absence of complement. Now Wassermann found that syphilitic virus, obtained from a fetal liver in which spirochetes had been demonstrated, when in the presence of the

cerebro-spinal fluid of a paralytic made a combination with it, and the complement present in any blood-serum. This complement was thus taken up or fixed, and was no longer free to cause hemolysis, when added to red blood cells and hemolysin in the way just mentioned. For this test he first incubates for an hour the syphilitic liver emulsion with the suspected cerebro-spinal fluid and the complement-containing serum of a guinea-pig; he then adds the mixture to an emulsion of washed red blood corpuscles of a sheep and some serum of a rabbit that has been several times injected with sheep's blood. If the blood cells dissolve, *i.e.*, if hemolysis or laking takes place, then the complement must have been free to do it, and could not have been fixed by the preliminary incubation. Wassermann maintains that this is due to the absence of any syphilitic anti-body or amboceptor in the cerebro-spinal fluid. On the other hand, if laking does not take place then the complement must have been previously fixed by the combination of the syphilitic antigen from the liver, and syphilitic anti-body in the cerebro-spinal fluid.

While Wassermann's observations have received the widest confirmation, his interpretation of the phenomenon has met with serious criticism, and is to-day practically discredited. It is quite true that the reaction just described is positive in over 95 per cent. of cases of parasyphilis, and negative in other diseases, so that beyond doubt there is some substance in the cerebro-spinal fluid which when combined with syphilitic virus has the power of fixing complement and thus inhibiting hemolysis. But the nature of this substance is a far more disputable matter. That it is not a specific syphilitic anti-body seems to be certain from the observations made, first, by Weil and Braun, that it shows the same power of inhibiting hemolysis when combined with other substances than syphilitic virus, for instance, lecithin. It is now known that the place of the syphilitic antigen can be taken by a number of substances, including lecithin, bile salts, brain emulsion, normal liver emulsion, etc., and Benecke has recently brought evidence to show that the efficacy of the syphilitic liver in Wassermann's experiments is due to the presence in large quantities of a peculiar soap pellicle that surrounds the fat droplets characteristic of that lesion.

Leaving, however, the theoretic aspect of the question, we have to note that all workers at the subject, notably, Plaut, Morgenroth

and Stertz, Marie, Levaditi, Yamanouchi, Weil, Eichelberg, and Neubauer are unanimous as to the high practical value of Wassermann's discovery. It may be said at once that it is the most certain sign of general paralysis we at present possess. Its only disadvantage is its complexity of application, and before it can be of much value in practice it will have to be considerably simplified.

Two other methods may be briefly mentioned. In 1907, Fornet and Schereschewsky stated that the serum of a luetic patient gives a specific precipitate with the serum of a paralytic. This observation has been received with much scepticism, and Plaut, who is, perhaps, the most reliable authority on the subject, says that this precipitate is just as common with normal serum. In 1908, Porges and Meier showed that the cerebro-spinal fluid of paralytics causes a heavy precipitate when added to the lecithin emulsion. This is of interest when one remembers the important role played by lecithin in the Wassermann reaction.

Let us now return to the question of the globulins. The theoretic interest that the increase in globulin has, resides in the fact that most authorities agree in attributing to it the origin of the substance active in the Wassermann reaction. The trend of opinion is towards regarding this as resembling choline and nucleoproteid in being katabolic products produced in the course of the disease. The relation between globulin and this substance that gives the Wassermann reaction becomes, therefore, a matter of great interest, and the phenomenon of globulin increase receives an accession of both practical and theoretical importance from these considerations. Now the experience of the past eight years has amply confirmed the fact of globulin increase in general paralysis, and its very great value in diagnosis, and the object of the present communication is to consider two new methods for the precise observation of this increase, together with the results of our experience with these methods. The first of them was described some five months ago by Noguchi, of New York; the second has not hitherto been described. There are, of course, several methods in general use for the separation of globulin from albumin, but all of these leave much to be desired in reliability and delicacy. For the cerebro-spinal fluid the following are the ones that have been most employed. Guillain recommends that the fluid be saturated with magnesium sulphate and then heated; a precipitate

indicates the presence of globulin. Nissl, Henkel, Nonne and Apelt, who have all published extensive monographs on this subject, add to the fluid an equal quantity of a saturated ammonium sulphate solution; Cimbal adds a saturated zinc sulphate solution. In our experience, however, these methods sometimes fail even after twelve hours to give a precipitate with fluids that at once give one into the two tests next to be described. We shall consider first the technique of these tests and then the results obtained.

Whichever test be applied it is essential first of all to be sure that no blood or pus has contaminated the fluid to be examined; results are of little value, even in cases in which there was a very high lymphocyte count, on account of the secondarily derived globulin. The test may be carried out at any date after the puncture, provided only that the fluid be clear.

The Noguchi reaction consists in the addition of 0.5 c.c. solution of 10 per cent. butyric acid in normal sodium chloride solution to 0.1 c.c. of the fluid to be examined, the application of heat, subsequent addition of 0.1 c.c. of 4 per cent. sodium hydrate solution with a further application of heat. The test tube should be read within three hours. A distinct opalescence is frequently found to occur even with the normal, but in cases of general paralysis and tabes, a characteristic precipitate of a peculiar flocculent value forms. The flocculi tend gradually to fall, so that after twenty-four hours at the latest the bottom of the tube is occupied with a fairly bulky precipitate, whilst the supernatent fluid is clear. In performing this test care must be taken to ensure the absolute purity of the butyric acid. This was evidenced during the experiments by the following occurrence: We had finished the brand of butyric acid obtained from Dr. Makind, of New York, that had been found to be satisfactory, and on December 7th tried a new brand with six cases. To our surprise all of these gave negative results, a finding that was shown to be due to impure butyric acid by comparison with it some that Dr. Noguchi kindly placed at our disposal.

The second test referred to is as follows: 2 c.c. of a saturated solution of ammonium sulphate are placed in a test tube, and 1 c.c. of the cerebro-spinal fluid is gently run on to the surface in the way done in the Heller nitric test for albumin. The formation of a ring at the junction of the two liquids constitutes a positive reaction. The ring is a clear-cut, thin, greyish-white one, hav-

ing the thickness of a thin piece of paper. It should form within three minutes, and within half an hour it may be observed that the surface of the ring shows a delicate mesh appearance resembling a fine cobweb. Indirect illumination must be used or it may escape detection. For this purpose we have constructed black-lined box into which the test tube can be inserted and viewed at right angles to an electric bulb, which is fixed within the box a few inches away. In applying the test it is essential to see, first, that the ammonium sulphate is pure, so that the solution is neutral and not acid, and, secondly, that the solution is quite saturated, which is best ensured by the use of heat in its manufacture.

We come now to the question of results. Up to the present we have examined only 27 cases, but the paucity of our material is partly compensated for by the uniformity of our findings, which has encouraged us to believe that the tests in question will prove to be of considerable utility.

The Noguchi test was applied in 15 syphilitic cases and 12 non-syphilitic. It was negative in all of the latter, except in one case of tubercular meningitis. Among the negative cases were 5 of dementia precox and 4 of tumor cerebri, conditions which are frequently very difficult to distinguish from general paralysis. Among the 15 syphilitic cases were 12 untreated cases and 3 treated ones. None of the latter gave a positive reaction, while all of the former did so. The 12 positive cases comprised 3 of tabes, 5 of general paralysis, 1 of tertiary syphilis, and 3 of syphilis of the nervous system. The test was thus positive without exception in all cases of syphilis, or parasyphilis, that had not had recent treatment, and negative in all other cases examined. The effects of treatment were shown, not only by the non-reaction of the cases under treatment, but also in the disappearance of the reaction 17 days after initiating treatment in a case that had previously shown marked positive reaction.

It is known that there is an excess of proteid in the cerebro-spinal fluid in no chronic diseases of the nervous system apart from syphilis, and that agrees with our findings. In cases of acute infection, on the other hand, there is often an excess of proteid present, whatever be the nature of the infection. This was so, for instance, in the only case of this kind—one of tubercular meningitis—that we have been able to examine.

The ammonium sulphate ring test was applied in all of the

above cases except two of tabes. The results agreed absolutely with these obtained by the Noguchi test, being positive whenever this was positive and negative whenever this was negative, so that the list of cases need not be repeated. The amount of proteid present in normal cerebro-spinal fluid is insufficient to give a ring with ammonium sulphate, though it commonly gives one with pure nitric acid. In general paralysis the amount is increased tenfold, and far exceeds that reached in any other disease, except, of course, acute meningitis. In the differentiation of general paralysis from syphilis with no nervous manifestations we would rely not on the mere excess of proteid in the former, for that occurs in both conditions, but upon the striking extent of the excess. This can be roughly estimated with the ammonium sulphate ring test in three ways, by noting, first, the density of the ring; secondly, the time that elapses before its appearance, and, thirdly, by the dilution with which it appears. The last point has greatly interested us, particularly, however, in connection with the globulins of the blood serum in syphilis, a matter with which we are not here concerned. Our observations on the point are as yet incomplete, but it would seem that we have in the dilution test a means of readily estimating the amount of globulin present, and, therefore, the degree of certainty of the diagnosis. We have several times, for instance, obtained a positive reaction in 15 minutes after diluting the cerebro-spinal fluid eightfold, a phenomenon that certainly never occurs in the normal.

To sum up, we consider that we have in the Noguchi reaction and in the ammonium sulphate ring test two methods of considerable value for readily recognizing an excess in globulin in the cerebro-spinal fluid, and thus for determining the presence of some parasyphilitic affection of the nervous system.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor;
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; Surgeon, Hospital for Sick Children, Toronto; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopedic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Physiology:
A. B. Eadie, M.D., Toronto.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto, Editor, The Canadian Nurse.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

A VEGETARIAN DIET USEFUL IN GOUT AND BRIGHT'S DISEASE

Now that the price of butchers' meat is soaring, one may well consider whether the eating of meat three times a day is necessary for the maintenance of a proper state of health and strength. When looked at from the opposite extreme, it seems to be conceded that a purely vegetarian diet is not an ideal one in Canada, however well it may suit the circumstances of Orientals. A vegetarian diet is weakening on account of its poverty in albumen and fat, as well as the loading of the intestines with fecal masses. Hence a mixed diet, composed of flesh meat, with cereals and vegetables, is most popular with us.

Such a diet is very suitable to healthy people, who assimilate their food well. A gouty patient, however, will do well to drop meat from his bill-of-fare. or to eat it with extreme moderation, and a vegetarian diet or a lacto-vegetarian diet will be salutary to mind and body.

In Bright's disease, especially in the early stages of it, the same observation holds good. Neuralgia appearing in different nerves and hyperchlorhydria often yield to it. Meat, which is chiefly digested in the stomach, leaves but a small, pasty residue of fecal matter for the lower bowel, and the regular meat-eater may require purgatives. On the contrary,

the bowels of the vegetarian become distended with hard fecal masses, which stimulate the intestinal musculature, causing regular motions without the aid of drugs.

Some excessive meat-eaters suffer from a form of neurasthenia, which appears to be due to uricacidemia, as well as from neuralgias and great irritability of temper, which betrays itself to their associates in a variety of ways. Experience proves that, in such cases, abolition of a meat diet and the substitution of a vegetarian one make for the disappearance of the neuralgic pains and greater sweetness of temper. The explanation of this phenomenon is not easy, but of the fact there can be no doubt.

Unlike meat albumen, vegetable albumen, which is poor in nucleins, does not lead up to the splitting off of uric acid from nitrogenous urinary wastes or to the formation of gouty nodules. Hence the suitability of a vegetarian diet for gouty subjects. During an attack of acute gout an exclusively milk diet is indicated, because no uric acid is given off from the para-nucleins of milk. Many patients with Bright's disease who have for years been accustomed to a liberal meat diet, or a diet into which meat enters pretty largely, adopt a vegetarian or lacto-vegetarian diet with repulsion. Clinicians agree, however, that the prognosis in this disease is very grave, so much so, that a patient with marked Bright's disease is fortunate if he may choose between a vegetarian or lacto-vegetarian diet and a funeral. Such a diet should be adhered to for a year or more, until the urine be-

comes normal or nearly so. Some authorities, more lenient to the patient, allow eggs as an addition to the lacto-vegetarian diet. The methodical examination of the patient's urine illuminates the treatment. If the urine is no longer turbid,—if tube-casts are few,—if albumen is absent or slight in amount, the propriety of the vegetarian diet in such a case and its beneficent effect in restraining nephritis are obvious. J. J. C.

THE PAPER MILK BOTTLE

THE paper milk bottle, in imperial measurement sizes, which will soon be put on the Canadian market by a Montreal concern, is an excellent device for preventing the spread of contagious disease through the medium of milk, and affords the very best means of securing pure milk to the consumer.

As a solution of the difficulties and dangers arising from uncleaned milk cans and glass bottles, the late Ernest Wende, M.D., Health Commissioner of Buffalo, in a paper read before a conference of the sanitary officers of the State of New York, October, 1907, recommended "The abolition of the existing milk cans and bottles and the adoption of the single service paper container for direct consumption from udder to mouth, from teat to tongue."

The New York Milk Committee in its seven infants' milk depots is using, for the first time in New York City, a single service paper bottle, which its

patrons are instructed to throw away as soon as it is emptied of milk. These bottles, which are in wine measure sizes, are made of paraffined paper. As they are sterilized when distributed, and are not used a second time, they are found helpful in the programme of clean milk production and distribution. The cost of the single service bottle is about a cent each, but this is, if anything, less than the cost of glass bottles, freightage on glass bottles, breakage, washing, etc. It has been estimated by dealers that the life of a glass milk bottle is less than fifteen trips Some of the advantages of the single service bottle are as follows: By doing away with the subsequent use of the bottle as a receptacle for serving milk, we remove at once the expense of collecting and the expense of cleansing and sterilizing milk bottles, together with the danger of spreading contagious diseases. The two first-mentioned advantages are obvious,—with regard to the third, because of the cleanliness employed in the manufacture, packing and shipping of the paper bottles, they will be sterile up to the time when filled with milk, thus removing any chance of contamination of milk by contact with an imperfectly cleansed bottle. Besides, on account of the thin walls of the paper bottles, they are about two and a half inches shorter than the glass bottles, and hence more convenient for storage and packing. The weight of the paper bottle is about two ounces, and the weight of the glass bottle is from 24 to 26 ounces.

Paper bottles, being of standard sizes, can be

filled with an automatic filler, which can be readily cleansed, sterilized and protected from dust when not in operation.

The paraffine coating of the paper bottle imparts no flavor to the milk, and when the milk is poured from the bottle it does not stick to the paraffine coating, as it does to the glass bottle or tin can. The milk keeps longer in the paper bottle because it is perfectly clean when the milk is put into it. The lid of the paper bottle can be easily removed when a part of the milk is to be removed and can be returned without perforating it or contaminating the milk that remains in the bottle.

The exact measure of milk is an important point in favor of the paper bottle.

The paper bottle is well sealed. The lid is fitted neatly into the bottle, coming in contact with the inside of the bottle for about one-half inch. This prevents the leakage of milk from the bottle in handling and shipping it. J. J. C.

THE CAUSES OF APPENDICITIS

ALTHOUGH much is said and written of the diagnosis of appendicitis, medical literature contains little of a satisfying character about the causes of that disease.

The efficient cause is said to be a mechanical one, due to the presence of dried feces, or some foreign body, in the appendix vermiformix. It is difficult to understand why such bodies should occasion per-

forations, but the frequency with which they are found in cases that have been brought to operation, or at autopsies, seems to render probable their agency, and also the fact that in the majority of cases perforation is produced by ulceration, and not by sloughing.

Appendicitis seems to be especially frequent in young males between the fifteenth and thirtieth years. It attacks males more frequently than females,—one authority says the proportions between the sexes are 4 to 1; another that they are 7 to 3. Then it is ascribed to muscular strains, as in lifting weights, to kicks, blows or falls involving the abdomen, and to the jarring of the body produced by jumping. This last group of agencies, viz.: boyhood and young manhood together with traumatism resulting from violent muscular exertion, should, if genuine, be particularly operative among athletes. Canadian surgeons are in a position to tell us, if athletes are more frequently brought to the operating table for appendicitis than are quiet young men, who do not indulge in violent bodily exertions.

Indiscretions in diet are said to be causative of appendicitis, such as eating excessively of roasted peanuts, which may be swallowed without being duly masticated. Overeating of any kind of food may precede a primary attack, and is important in the recurrent form of the malady. Constipation is also mentioned by authors as a cause of appendicitis.

Referring to the agency of uricacidemia in the production of the disease, Dr. French (*Practice of*

Medicine, 1905) says: "It rarely, if ever, occurs among the Brahmins, who abstain from eating meat. The Brahmins are not the only East Indians who abstain from eating meat, and who are rarely, if ever, attacked by appendicitis. Dr. Bryant, whose correspondence on medical matters in India is published in the February, 1910, number of *The Western Medical Review,* Omaha, Neb., makes a few remarks on this very subject. Referring to the classes of patients he saw at the J. and J. Hospital, Bombay, which can accommodate 700 indoor patients and has an outdoor or dispensary department where hundreds are treated daily, and also to the Medical College Hospital, Calcutta, which has 400 beds and almost numberless cases in its outdoor clinics, he remarks that the paucity of surgical cases seen in these and other hospitals of India immediately attracts the attention of the American visitor. The English surgeons, in attendance at these hospitals, explained this remarkable dearth of surgical cases by stating that there are very few cases of appendicitis in India. The rarity of cases of appendicitis, they say, is due to the manner of life led by the natives—not very active,—the kind of food they eat, rice, and, last but not least, the fact that they are seldom overfed. This last assertion can be readily understood, when one learns that the average wage paid for a man working in the farming districts of India is only eight cents a day in our money, and the laborer boards himself.

It seems safe to conclude, therefore, that the overeating of meat is the principal cause of appendicitis,

and, incidentally, is the chief factor in Western surgery. Hence a diet, similar in character to that given at the institution which sheltered the childhood of Oliver Twist, would act as a preventative. As it is unlikely that the youth of Canada, particularly the young athletes, will adopt a diet of gruel or rice, it behooves them to keep their teeth in good order and to chew their meat well if they wish to escape the surgeon's knife. J. J. C.

"WE ALL THINK THAT IS NOT AS IT SHOULD BE"

J. A. T.

We publish on page 334 of this issue a reply from the President of the Ontario Medical Council to our criticisms of April. Read it.

It has been pointed out that we included the stenographers' account in the amount drawn by the members of the Council. We apologize to the Council and to the stenographer. We shall be glad to make any correction which will place the members of the Council in a more favorable light. The bald, uncomfortable fact remains that the Council members have in two years doubled the amount drawn by themselves and have changed a net profit of $3,508.58 into a loss of $3,614.24. Did calling a four days' session six and charging travelling days extra have anything to do with it? Does Dr. Hardy endorse this ingenious method of transferring the surplus? The worthy Doctor says the supplying of a detailed statement of the financial dealings of the Council would be a mat-

ter of great expense. We make the President of the College of Physicians and Surgeons this offer. If he will instruct the Treasurer to give us a certified detailed copy of the expenses of the Council for the years 1906-10, we will print it in this journal and mail a copy of it to every member of the College of Physicians and Surgeons at our own expense. It shall not cost the Council nor the College one cent. This detailed account shall give: (1) Time and day at which Council met and adjourned. (2) Number of days Council met. (3) Per diem allowance by by-law. (4) Name of each member present. (5) Total per diem allowance paid him, mileage paid him for such meeting. It shall also give the same information in regard to the Executive Committee, Discipline Committee and each and every other committee for which members have been paid, and state whether the meetings of these committees were held during the Council session or not.

The President answers for himself and the Treasurer that they "are not afraid" of any disclosures that might be made. Such, of course, being the case, let them accept our offer and not try to throw the responsibility upon someone else. This information the members of the College are entitled to and must be given.

Dr. Hardy speaks of two special meetings as accounting for the increase in expenditure. Great Scott! Can it be that there was a meeting for which the boys did not charge? Get busy, fellows, get busy!! We will gladly publish *in detail* the cost of the spe-

cial educational meeting referred to. This meeting, lasting for three days, cost $2,704.30; 28 members were present at $20.00 per day. Figure it out and see how things tally. Dr. Hardy knows the cost of the meeting to consider the Roddick Bill. Evidently it was a good sum. The profession will not know the cost of that meeting until the next Announcement appears. In 1906-07 the Council had a surplus of $66,161.44; in 1907-08 it had the College building and $48,359.41; in 1908-09 the college building and $44,-745. The President tells us that in 1909-10 it will be the College building, $25,000 in bonds, and "several thousands at interest." To the profession this looks like bankruptcy. Who got the money and how did they get it?

Notwithstanding Dr. Hardy to the contrary, the excessive expenses of the Council do not come from the long distances travelled by the members, 8 of whom live in Toronto, 5 within 50 miles of Toronto, 2 within 75, 1 within 100, 6 within 125, 3 within 175, 1 within 200, 3 within 250, and 1 within 450. The eight Toronto members cannot draw mileage nor per diem allowance for travelling. It would be interesting to know "the large sums paid for the time spent in travelling" by these other members, of whom but one is a day's journey from Toronto. Surely the President, who is in a position to know "these large sums," will not withhold such essential information. Is it the large sums paid for the time NOT SPENT in travelling and for calling a four days' session six which causes the excessive outlay?

Dr. Hardy says the work of the officials has greatly increased and, therefore, the expense. Did he ever read that simple and concise legend on the door of the Council building, "Dr. Bray—Registrar —Hours 2 to 4 p.m., Saturday 10 to 12 a.m."? Is he really overworked? Why not increase his salary? It has been the same for years—$2,500.00; Treasurer, $600.00; Prosecutor, $1,200.00. There has been no increase except $200.00 for the Prosecutor. No wonder the expenses have increased!

Dr. Hardy will pardon us for drawing his attention to p. 322 Annual Announcement, 1909. Dr. Temple: "We were told that there were *certain Committees* had a meeting during the time of the session and were paid $15 for that meeting besides the general allowance. *We all think that is not as it should be.*" Did Dr. Hardy think that this was as it should be? The Announcement says the President, Dr. Hardy, was in the chair when this statement was made. Eleven pages of the Announcement are taken up with the discussion of Dr. Temple's financial report, but there is no record of any member of the Council having sufficient curiosity or interest to ask what these committees were or who the members who had indulged in this grafting. Why this studied indifference? Is this too good a thing to be interfered with? Is grafting in the Council so prevalent that it excites but a passing smile? Is this why the Council voted down a resolution of Dr. Hart, p. 380 Announcement 1909, to have the accounts published in detail?

Ask your representative who these grafters are? Ask him why HE refused to have the accounts published in detail? Ask him if HE endorses the action of the President of the Council in refusing to allow this information to be furnished by the Treasurer?

W. A. Y.

ERRATA.—By mistake, we stated in our April editorial entitled "How Long Will It Be Before the College of Physicians and Surgeons Is Bankrupt?" that both the Treasurer and the President of the College had refused us access to the books, whereas the facts are that the Treasurer simply asked us to submit the matter to the President of the College, the request being "of such an unusual nature."

AN IMPERTINENCE

The Optical Co.
Optometrists,
Toronto.

Office Hours, 9 to 5
Phone

Please make a thorough examination of the eyes of
M.
and report fully to me.

Dr.

A pad of these orders was recently sent by an optical firm to a physician of long standing in Toronto. He forwarded the communication to this office for editorial reference.

Some people have strange business methods indeed. There is such an ugly name for Smart Alecs of

this ilk that they had better be shunned by all practitioners. They should remember that "the eyes are the windows of the soul," and some day when, by their ignorant meddling, they have pulled down the blinds and shut out the light, they may, perchance, have to face the law of the land.

There is no rapid transit to the degree of Doctor, the gateway of long study and acquired knowledge only opens on the "Promised Land," and so far the Jews have never had any dealings with the Samaritans.

W. A. Y.

THE RETIRING MEDICAL HEALTH OFFICER

In the resignation of Dr. Charles Sheard from the position of Medical Health Officer Toronto has sustained a loss. Dr. Sheard possessed the attributes of fortitude, courage and decision, a useful trinity indeed when dealing with matters pertaining to the health of a large city and the "jetsam and flotsam" that frequently makes up the City Council of this rapidly growing village. Dr. Sheard was not elected because of any political bias, nor did he seek the office for pecuniary reasons, for with this world's goods he is abundantly supplied. So he stood, unique, forceful and able, when occasion demanded it, like one of Gilbert Parker's characters, to "stand under the blue canopy of heaven and curse the wide, wide world." If all the busybodies whom Charlie Sheard from time to time consigned to summer quarters

were there now—well, there wouldn't be any room for the rest of us.

As physicians, as a city, and even as a City Council, we are sorry to lose so efficient an officer.

If it was not for having to boil so much water, we would drink a long health to him "and golden nature's wealth to him." W. A. Y.

THE ACADEMY OF MEDICINE ELECTIONS

THE Academy of Medicine is facing another new year of its existence, and the time for shuffling and drawing the cards for office has come again.

The past year has been a history-making one, and the interest of the Fellows has been ever stimulated by addresses, papers and discussions of real value scientifically and practically.

Dr. McPhedran, the retiring President, may congratulate himself on the support of the Fellows during his year's occupancy of the Chair and the continued success of and bright prospects for the future.

The Nominating Committee elected at the meeting of the Acadamy on April 5th were: Drs. A. A. MacDonald, J. F. W. Ross, A. Primrose, S. M. Hay, W. H. B. Aikins, H. B. Anderson, John Ferguson, H. T. Machell, E. E. King, A. McPhedran, W. J. Wilson, W. A. Young and J. J. McKenzie.

The Nominating Committee met, according to by-law, on Thursday, the 14th of April, and elected the following slate: President, Dr A. A. MacDonald;

Vice-President, Dr. N. A. Powell; Honorary Secretary, Dr. Harley Smith; Honorary Treasurer, Dr. D. J. Gibb Wishart. The following Fellows were nominated for Council, and we name them according to votes received: Drs. J. F. W. Ross, R. A. Reeve, W. A. Young, H. J. Hamilton, W. H. B. Aikins. H. B. Anderson, E. E. King, and J. M. Cotton.

The nomination of the new President, Dr. MacDonald, has met with universal approval. Dr. MacDonald possesses in a very large measure the *savoir faire* of a man of the world, so necessary on occasions when the Academy has for its guests distinguished visitors from over-seas or across the line, as is frequently the case. The Vice-President, Dr. Powell, has done much towards enhancing the interests of the library, and his attainments and keen wit are too well known to require from our feeble pen the touch of a word.

May the Academy add to its years another new one of even greater prosperity and property galore and to its archives much of scientific value.

W. A. Y.

"TORONTO JAIL A HEALTH RESORT"

More power to the comet and the incense from its tail, for if the pest house over the Don, alias the jail, has become a health resort, something in the heavens above must have done the house-cleaning.

In an evening paper the other day Governor

Chambers is quoted as having said: "Health-resort is a rather strong word, but it is that in reality. At the least, nine-tenths of the inmates leave in far better health than when they arrive."

All this is simply marvellous in our eyes. Can we be dreaming, then waking is pain, for only four short weeks ago this institution was found to be a place for infection rather than recuperation. Years ago better conditions were promised by the city authorities; but we did not know that it had so soon come to pass. In order to keep up the delusion of the sanitarium idea, let us suggest a few quarts of buttermilk applied nightly to the nasal complexion of Governor Chambers' patients. W. A. Y.

DR. HODGETTS DECLINES POSITION OF MEDICAL HEALTH OFFICER

At the time of writing Dr. Hodgetts has received the nomination of the Board of Control for Medical Health Officer of Toronto. He has respectfully declined the honor. Owing to the annoyances and sometimes unfair criticisms showered by ignorant, meddling aldermen on such officials at the City Hall, we question whether the Board of Control may not have their troubles in securing a scientific man for this important position who will subject himself to the treatment of men, the majority of whom occupy their seats as aldermen solely for the publicity they receive. W. A. Y.

Editorial Notes

An Amendment to the Ontario Health Act

An important amendment to the Ontario Health Act was passed during the last session of the Legislature. It sets forth, that, where a local board of health is not established or where it has refused or neglected to act with sufficient promptness and efficiency, or to obey any order of the Provincial Board of Health, the Minister having charge of the Provincial Board of Health may direct the chief health officer of the Province to carry out the work at the expense of the municipality.

Antirabic Virus

A. M. Stimson, Washington, D.C., describes the mode of preparing antirabic virus after the Pasteur method, and of employing it in the prevention of hydrophobia. The spinal cord of a hydrophobic rabbit is dried for a time over caustic potash, at a temperature of 23 C., which causes it gradually to lose its virulence. Persons who have been bitten by rabid animals are first inoculated with a spinal cord which has lost its virulence and on successive days with virus from cords, which have greater and greater potency. The antirabic virus consists, therefore, of the spinal cord of a rabbit plus the micro-organism of rabies and its products, artificially modified as to its pathogenic properties. It is administered subcutaneously in emulsion and the immunity induced is of the active type, the patient producing in his own body the antirabic bodies, which are demonstrable in the blood The antirabic virus can be preserved in an active condition for at least three weeks, if placed in neutral glycerine, or if mixed with antiseptics, and can thus be despatched from the laboratory where it is prepared to other places where it may be needed. The treatment is preventive and has no influence after rabies has

developed. It fails in cases in which the period of incubation is too short, or in rare cases in which the patient seems unable to develop the antirabies. The treatment usually takes three weeks, daily injections of the virus being given. The virus which is used at the Toronto department for administering the Pasteur treatment is supplied daily from the laboratory of the New York City Board of Health, which is under the direction of Dr. Park.

Scientific Treatment of Tramps

Public opinion holds that idlers and vagrants are simply vicious, lazy persons, who need punishment. That tramps, drunkards and idlers do receive punishment and do endure much misery and privation, as the outcome of their indiscreet conduct or lack of purposive industry, are facts which pass unnoticed, or are thrust aside, when forming this opinion—the underlying idea in the public mind being that these human wrecks are able to work for their living and should be obliged to labor.

An opposite opinion has grown up in Denmark, where an effort—humane and scientific in its range—has been made to solve the tramp question. There the beggar or tramp is arrested and taken to a settlement or a farm colony, where he becomes a patient. He is carefully studied, properly treated and given only such work as he is able to do. A large percentage of these men recover and are released, after positions have been found for them. Some prefer to remain, and their earnings accumulate. The incurables are obliged to remain. The underlying idea at the basis of the action taken in Denmark, in regard to chronic tramps and beggars, is that they are sick men, some of them suffering from chronic starvation and others from neurasthenia. For these reasons they are idlers, and not from choice. The Danish way of looking at the tramp and beggar question deserves imitation in Canada. Why should we not make an effort to restore some of these outcasts to usefulness? The incurables among them can remain on a farm colony.

The Use of Medicines in Practice

In quashing the Police Court conviction against Robert B. Henderson, an osteopathist, for practising medicine without being registered, His Honor, Judge Morson, is reported to have said, March 23, 1910, that osteopathic treatment is not a violation of the Ontario Medical Act. He remarked further that "There appears to be no case holding that medicine can be practised without the use of medicines. There was no medicine administered in this case, and, if the Ontario Medical Council desire the meaning of the word 'Medicine' extended to cover the present or like cases, they must apply to the Legislature."

Judge Morson's interpretation of the practice of medicine would reduce the field of medical education to small dimensions. Of what use would it be for students to attend lectures in Physics? Why should they receive instruction in electricity as applied to medicine, if, when launched on their careers, the only logical outcome of their legal field of practice would be the ability to write a prescription or compound a mixture?

If the administration of medicines is the sine qua non of medical practice here, the expenses, public and private, of medical education are excessive, the course of study too varied in its features, the preliminary training of students too severe.

Besides, other factors than drugs enter into the therapeutics of disease. So much so, indeed, that, even in the management of purely medical cases, drugs may be of merely minor importance. In cardio-vascular diseases, the four cardinal factors in successful treatment, other than drugs, are *rest, massage, hydrotherapy and diet*, says Dr. H. A. Hare, in the *Therapeutic Gazette*. Now, applying Judge Morson's ruling to a hypothetical case of heart disease, an osteopathist, who would limit his treatment to the above-mentioned cardinal factors, but would avoid prescribing digitalis to regulate disordered heart action or mercurial purges to relieve gastro-intestinal catarrh, would not be

violating Section 49 of the Ontario Medical Act. Would not cases arise in the practice of an osteopathist in which life would be placed in jeopardy, just because he must protect himself against a prosecution for illegally administering medicines? Should an osteopathist be allowed to practice for his own benefit only, or are the interests of the patient paramount? So much for the educational and humanitarian views as to osteopathy. Now what is osteopathy anyway? *Dorland's Illustrated Medical Dictionary,* Fifth Edition, 1909, defines it to be: "A system of *Medicine* in which diseases are treated by manipulating the bones and by other manual applications, intended to restore the deranged mechanism of the body." Then an osteopathist does practice *medicine* in the sense indicated in Dorland's definition, although he does not use drugs. If not registered he violates the Ontario Medical Act:

"In practising, professing to practice or advertising to give advice on Medicine, Surgery, or Midwifery, provided always that such act is done for pure gain or hope of reward." (Section 49, Ontario Medical Act.) An amendment of this section of the Ontario Medical Act seems superfluous.

Chlorine Gas to Purify Toronto Water

Pending the filtration of the Toronto water supply, an effort is being made to purify it with chlorinated lime. The daily water supply of Toronto is 35,000,000 imperial gallons, and about 150 pounds of chlorinated lime are introduced each day into the water supply which reaches the pumping station through the water tunnel. This experiment has been in operation here since March 21st, 1910.

It is said by sanitary authorities that a water supply thus treated possesses no disagreeable taste, and that its hardness is not appreciably increased. Moritz Traube (*Zeitschriftfür Hygiene und Infectionskrankheiten* XVI., p. 149,) gives a simple method of purification by means of chlorinated lime, which, add-

ed to the extent of less than half a gramme to a hundred litres of water, kills all bacteria within two hours. The excess of the agent is neutralized by the addition of somewhat less than half the amount of sulphite of sodium, which, added somewhat in excess, does not harm, since it is soon oxidized. The efficient agent in Traube's method of water purification is chlorine gas liberated by the interaction of chlorinated lime and sulphite of sodium.

The "Woolf" method consists in adding a 2 or 3 per cent. solution of common salt to the water, which is then decomposed by a current of electricity of sufficient strength. The sodium compound is pronounced to be more efficient than the chlorinated lime, for the whole of its available chlorine is almost immediately diffused through the water and acts at once. After purification the chlorine is neutralized by means of sodium sulphite (140 of sulphite to 40 of chlorine), and the water is then practically unaltered in appearance, taste, smell and hardness, but only when the amounts of the compounds have been carefully determined. Experiments of this nature are doubtless interesting in the laboratory, and they may prove to be of service in preventing disease here, until the water filters are in working order.

J. J. C.

PERSONALS

At the regular meeting of the Section of Medicine of The Academy of Medicine, held on April 12th, Dr. John Ferguson was elected Chairman by acclamation.

Dr. N. A. Powell was confined to bed for ten days last month suffering from what threatened to be mastoid trouble. He, however, recovered nicely and took up his work again two weeks later.

Dr. W. H. B. Aikins intends moving to Bloor Street West this autumn, having purchased No. 134, the house occupied at present by Dr. F. A. Cleland. Dr. Aikins intends selling his property at No. 50 College Street.

The profession will regret to learn that Mrs. Thistle, wife of Dr. W. B. Thistle, 171 College Street, has been confined to the house for several months suffering from gastric ulcer. We are glad to know, however, that she is improving.

In the course of the next twelve months, it seems as if there will be a number of removals on the part of physicians on Carlton Street, on account of the recent sale of property along that street. Among those will be Dr. Price Brown, Dr. Murray McFarlane, Dr. Greene and Dr. Emory, all of whom, we understand, have sold their properties.

Dr. G. Reid Simpson, who for some years has resided at 82 College Street, practicing "Eye, Ear, Nose and Throat," died on April 8th. Dr. Simpson had been ill for several months and his death is very much regretted by the profession. His funeral took place to Mount Pleasant on Monday, April 11th, and was largely attended by his brother practitioners.

The work in connection with the erection of the New Toronto General Hospital was started on April 9th. A large number of teams were turned in by the contractors who have the contract for the excavation work and there is every prospect of the foundation work in connection with this immense structure being completed before the snow flies. The Hospital By-law passed we are glad to know, with hardly a dissenting voice.

Selected Articles

ROMANCE OF A GOLD-HEADED CANE

In a quiet corner of the Royal College of Physicians, London, England, may be found, among other treasures, a gold-headed cane which bears a history worth knowing at any time, but of special interest to Canadians just now because of the recent



TORONTO GENERAL HOSPITAL GOLD-HEADED CANE.
Names of the holder of the cane each year will be engraved on the discs.

foundation in Toronto of a form of scholarship which has taken its rise from the fact of this celebrated cane's existence and its history.

For two centuries, at least, a gold-headed cane was considered an essential appendage of every fashionable physician. It had usually a hollow top in which was carried some aromatic drug, the inhaling of which was supposed to prevent contagion. This particular cane was carried for one hundred and thirty-six

years—from 1689 to 1823—by six famous London physicians in succession. Its first owner was Dr. Radcliffe, founder of the famous Radcliffe Library at Oxford. Before his death he bequeathed it to his friend the great bibliophile, Dr. Mead, from whom it passed to Anthony Askew, then to the Pitcairns, uncle and nephew, and last to Dr. Matthew Baillie, who died in 1823. His widow presented it to the Royal College of Physicians.

Three years later there was published anonymously a most interesting little volume, entitled "The Gold-headed Cane," written in the form of an autobiography, in which the cane discourses entertainingly of its various "masters," giving graphic and amusing sketches of the physicians themselves, their high-born patients, and the social and medical conditions of their times.

"The Gold-headed Cane" was first published in 1827. A second edition was issued in 1828, and a third edition nearly sixty years afterwards, in 1884. Copies of the latest edition are already difficult to obtain, while the earlier editions are extremely rare. One of the most valuable possessions destroyed in the Hanlan Hotel fire in August last—certainly the one most regretted by its owner—was a shabby little volume with quaint wood cuts of the cane and its masters and faded type, a second edition, and probably the only one in Canada. Although the author of the book was himself a physician, and a contemporary of the last owner of the cane, he permits it to relate its adventures in a gossipy and discursive fashion that is vastly entertaining. Radcliffe, the cane's first master, was physician to William of Orange, whom he treated for dropsy, and to Queen Mary, who died of smallpox. He offended Queen Anne by bluntly telling her she had "the vapors." Altogether he seems to have treated his Royal patients rather brusquely.

The Cane sketches Radcliffe's personal appearance, quotes his caustic speech, and gives glimpses of his private life which form a vivid picture of the times and manners of that day. The wise and generous disposition of his great fortune by establishing several Oxford foundations still makes the blunt old physician of two and a quarter centuries ago a present-day benefactor. Of Drs. Mead and Askew, the scholars and great bibliophiles, the Cane gossips at length; of the Pitcairns and of its last owner, the great Dr. Baillie, physician to George III., and of its final disposi-

tion in the Royal College of Physicians, in the heart of the great city where its successive owners walked and practised.

In the autumn of last year the owner of the burnt volume, a Toronto physician, conceived the idea of procuring a duplicate of the famous cane for winners of Canadian medical honors. Mr. P. C. Larkin, Vice-President of the Board of Trustees of the Toronto General Hospital, at once offered to donate the cane, which, it was decided, should be carried for a year by that member of the ex-house staff association of the hospital who made the most important contribution to medical science during the preceding year. Application was made to the Royal College of Physicians in London for permission to obtain an exact replica of the original cane. That august body, after much deliberation, sent a courteously-worded refusal. It was, however, decided to carry out the idea, and a gold-headed cane, copied from the cut in the book which was afterwards burned, was ordered in London. This reached Toronto during Easter week and was presented to Dr. Thomas Cullen, of Baltimore, at the annual banquet of the ex-house surgeons on Easter Monday. In the absence of Mr. Larkin the presentation was made by Mr. J. W. Flavelle, Chairman of the Board of Trustees.

In artistic workmanship and beauty the cane is without a peer in Canada. A further generosity on the part of the donor is a permanent gift of a duplicate silver-headed cane to the man who carries the T. G. H. gold-headed cane for one year. To have carried the cane will mean, first, that the physician has been one of that large group of medical men who have been in training and residence at the Toronto General Hospital; and, second, that he has in after days contributed something worth while to the scientific advancement of his profession.—*Faith Fenton Brown, Globe, Toronto.*

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

Toronto, April 12, 1910.

Dr. W. A. Young, Managing Editor THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—Will you kindly allow me to add a few details and corrections to your editorial in the April number of the Journal. In your letter of February 15th to me, you made no request "for permission to verify certain statements that had been made regarding the Council's expenditures." You simply asked that I instruct the Treasurer to give you access to the books of the College, and gave no reason whatsoever for your request. However, this is a small matter, as my answer would have been the same for the same reasons.

You ask, "Are they" (and I suppose you mean the President and Treasurer) "afraid of any disclosures that might be made?" and I can answer that by saying *They are not!* The books of the College are in charge of a bonded official and are all audited yearly. The Council appoints a Financial Committee, which has the supervision of all fiscal concerns of the College, and this committee consults with the Treasurer and examines all the details of all his books, vouchers, etc., and then reports to the Council during the Sessions. This is the procedure of all parliaments in the Empire, and our Council meetings would last a month if each of the thirty odd members were forced to verify all details of the financial and other matters that come before the Council.

On page 221, April Journal, you state that members of the Council drew certain sums during the years 1906-09, and in every case your figures are not correct. I will leave it to you to find out where you are wrong, but among other matters I will call your attention to the fact that the stenographer is not a member of the Council. This is, perhaps, only a detail, but it shows the inaccuracy of your article and your figures. What would happen to our books and records if four thousand such

statisticians had access to our books? We would probably have four thousand different statements.

Further, you make no mention of any probable cause for the increase of the expenses of the Council. You do not mention the fact of the two special sessions, one, called in the Fall, '08, to revise and bring up-to-date the curriculum. This had not been systematically done for many years, and after the Special Committee had considered and arranged the details of the matter and spent many days' hard work on the subject, it took the Council three (3) days' hard and constant work to accomplish it. With a few minor changes, the present curriculum will stand for many years. Without the Special Committee's work, and, if the matter had been brought up at the regular meeting, that meeting would have lasted two weeks.

The other special meeting, held in the Fall, '09, was called to consider the Roddick Bill, and the opinion of the majority of the College demanded that the meeting be called. Our Council then approved of the Bill as presented; but, unfortunately, nothing further has been accomplished owing to objections against it on the part of Quebec and British Columbia.

Now, as to the supplying of a detailed statement of the financial dealings of the Council every year to each member of the College. This would be a matter of great expense, printing, postage, etc., and no good would result. How many doctors would try to wade through a mass of figures, covering many pages? As I said in my letter of February 16th, so I now repeat. Any member of the Council may call for any details during the Council session, and these details will be forthcoming. This has always been the policy and custom of the Council.

The expenses of the Council could be greatly reduced if all the members lived near Toronto, but the majority live long distances away, and large sums must be paid for mileage and for the time spent in travelling, and I think the members of the College are quite willing to pay for the privilege of having their representatives live within their own constituencies. The work of the officials increases every year, and the expenses grow with the growth in membership of the College. Our next year's statement will show that we have $25,000.00 of Ontario Government bonds, and several thousand dollars drawing interest in the bank; besides which our property has greatly increased in value since

it was acquired. All these things show that the Council has always been alive to the best interests of the College, and that it has always been the desire of the Council to keep the expenses as low as possible, consistent with satisfactory service to the students and the profession at large.

I am, Sir,

Yours very truly,

E. A. P. HARDY.

621 Spadina Avenue, Toronto.

THE 1910 MEETING OF THE BRITISH MEDICAL ASSOCIATION

Colonial Reception Committee.

SIR,—The Colonial Reception Committee is particularly desirous of bringing the Annual Meeting, to be held in London in July next, to the notice of all medical practitioners residing in the Dominions beyond the seas, as affording them an unusual opportunity of visiting London both for the scientific purposes of the meeting and also for social intercourse with their fellow practitioners throughout the Empire.

The Colonial Reception Committee, in conjunction with the Colonial Committee of the Central Council, desires, through the medium of this journal, to extend a very cordial invitation personally to all medical practitioners in the colonies, and assures them of a hearty welcome to the Annual Meeting and to the capital of the empire.

Great efforts are being made by these two committees to arrange such entertainments as it is hoped will meet with the approval of their colonial brethren and so add to the success of the meeting of 1910. We are, etc.,

EDMUND OWEN, Chairman.

DONALD ARMOUR, Honorary Secretary.

Of the Colonial Reception Committee.

429, Strand, W. C. Jan. 3rd.

WHO HAS TREATED PROGRESSIVE MUSCULAR ATROPHY SUCCESSFULLY?

To the Medical Profession:

A gentleman of means has a member of his family afflicted with Progressive Muscular Atrophy, the diagnosis having been with certainty established after consultation with some of the highest neurological authorities of New York City and various cities of Europe.

These physicians are unanimously of the opinion that the case is incurable, inasmuch as up to the present there has been published no form of treatment or medication which is known to have positively cured or arrested the inroads of this malady.

This gentleman wishes to spare no effort to bring relief. He believes that perhaps, somewhere, some physician may have successfully hit upon some method of curing a case of Progressive Muscular Atrophy, but, who through his inability to corroborate his results, owing to rarity of cases or through modesty, or for fear of being discredited, has failed to publish his case. This gentleman's idea is to try and bring this record to the surface by making an appeal to the profession through this journal.

The case itself presents the characteristic picture and is typical of Progressive Muscular Atrophy in every particular. The patient is fifty years old, married, in excellent general health. About one and one-half years ago the disease made its appearance in the left hand, progressed, and within a few months involved the right hand. Its progress since has been very slow. The family of this patient wishes to announce that any physician who supplies a complete history and detailed description of the method of treatment of any case of Progressive Muscular Atrophy he may have successfully treated, the trial of which leads to the cure or arrest of the disease in their relative, will be rewarded by a liberal cash prize.

Requests for further particulars and replies should be addressed to "Enquirer," care of this journal.

News of the Month

OPENING OF THE NEW TUBERCULOSIS SANITORIUM AT LONDON, ONTARIO

On April 5th the Governor-General opened the splendid Sanitorium for the treatment of Pulmonary Tuberculosis, built by the London Health Association and situated at Byron on a high bluff overlooking the River Thames, just outside the city of London. The Hon. Adam Beck, Chairman of the London Health Association and prime mover in the whole scheme for the organized fight against the White Plague in this district, introduced His Excellency, and told the story of the organization and building of the institution. He said in part: "The city of London, your Excellencies, is favored in having institutions that have done much in the past to relieve the suffering of the sick. We have two hospitals that would do credit to cities of much larger population. We have ample provision for the aged, the incurable, homeless children, and for the imbecile. There were two ways for us to establish an institution for tuberculosis, which we have in this western district unfortunately done little to relieve. One was a municipal hospital with government aid, the other a charitable organization with municipal and government aid. We have adopted the latter plan, feeling that in giving our citizens the opportunity of giving to and helping an institution of this kind we were developing the charitable qualities of our people. We have, your Excellencies, an institution here that will take care, not only of the incipient cases, but of acute cases, for we have an infirmary. Then we have that ministering angel, the visiting nurse, who will investigate and aid cases in the city, the workshops and the public schools. We were wondering some time ago where the money was coming from, but now we have no fear. It will come from the hearts of our people. We are very fortunate, your Excellencies, in not having to depend on large contributions. It is not the work of a dozen men and women, but the work of the citizens of London and the women of London."

Earl Grey's address, which showed a warm interest in the

anti-tuberculosis movement in Canada, and an intimate knowledge of what that movement was accomplishing, was in part as follows: "I have listened with great pride and pleasure to Hon. Mr. Beck's speech. The statements he has made are most encouraging. The movement against the white plague, which has found its expression in this hospital, has proceeded from the hearts of the community, and I feel that you are all as one in your efforts to mitigate the sufferings of those who are victims of one of the greatest curses afflicting the people of Canada. Tuberculosis, like the mosquito, finds its existence in dark, damp, unventilated places, and tuberculosis can be abolished just as effectually as the mosquito. I would only remind you that in the communities where the people are organized in their efforts to fight the white plague they have succeeded in reducing the rate of mortality by one-half." Earl Grey also made some very complimentary remarks upon the excellent work done by Mrs. Crerar in Hamilton.

The Hon. Mr. Hanna made an excellent address, explaining the position of the government and what they were doing to aid in the fight against tuberculosis.

The whole comprehensive scheme of the London Health Association is briefly this:

(1) Compulsory notification and registration of all cases of tuberculosis.

(2) Inspection and disinfection of all infected premises.

(3) A visiting nurse and municipal aid to the needy.

(4) A sanitorium at Byron for incipient cases, with a farm to employ the convalescents.

(5) A large ward in the Victoria General Hospital for advanced and acute cases.

The sanitorium at Byron consists of an administration building, an infirmary and four open-air cottages, affording accommodation for about forty patients. Besides these there are a laundry, a recreation building and a doctor's cottage. In many ways the institution is a model of its kind. The directors have spared neither money nor time providing a thoroughly modern plant with every comfort and convenience for the patients. The infirmary, with accommodation for eighteen patients, is connected by a covered passageway with the main building and steam heated from a central heating plant. It has wide north

and south verandahs, which may be converted into closed sun parlors by means of glass doors. The beds are on rubber tired wheels and can be moved in and out very easily. The cottages are private and public. They are all provided with wide and well protected verandahs, and each cottage has electric light, bath and shower. Every patient is provided with a reclining chair of the latest model, and a sleeping bag.

E. A. McCulloch, B.A., M.B., formerly of Toronto and late of Trudeau, Saranac Lake, has charge of the sanitorium and city dispensary.

CANADIAN MEDICAL ASSOCIATION

For the 43rd annual meeting of the Canadian Medical Association in Toronto, on the 1st, 2nd, 3rd and 4th of June, transportation arrangements are in force on the Standard Certificate Plan, with the exception of British Columbia, where the regular summer tourist rate will prevail. All intending delegates should consult with their ticket agents when purchasing first-class transportation to Toronto, as to rates, dates of sale of tickets, and time limits and routes. For these purposes the Association and the Canadian Dental Association are coupled; and fare will be single for going and returning if three hundred are present at the two conventions holding Standard Convention Certificates, between Halifax and other Eastern points and Laggan and Coleman, B.C. The first general session will be held on the afternoon of the first day, when the President-elect, Dr. Adam H. Wright, Toronto, will be installed in office and the opening ceremonies will take place. Following this there will be the report of the Milk Commission by the Chairman thereof, Dr. Chas. J. Hastings, Toronto, and addresses by Dr. Evans, of Chicago; Dr. North, of New York, and others. On the evening of the first day, Dr. Herringham, London, England, will deliver the address in Medicine, which will be followed by the discussion on Dominion Registration. The sections which have exceptional programmes will meet in the forenoons. On the afternoon of the second day (Thursday) there will be an excursion to Niagara Falls and a dinner at the Clifton House. The address

in surgery will be delivered Friday afternoon by Dr. Murphy, of Chicago, followed by a symposium on exophthalmic goitre, and at 5.30 p.m. the annual meeting of the Canadian Medical Protective Association will take place. Friday evening the address in Obstetrics, by Dr. Henry Coe, of New York, followed by a symposium on the psycho-neuroses. A general session will be held Saturday forenoon, and about eleven an excursion will be taken to Guelph to visit the Ontario Government institution in the Royal City.

THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS

THE year 1909 will be marked in the calendar as a red letter year in the history of the crusade against consumption. The movement received a great impulse from the congress of distinguished physicians which was held in Washington, U.S. in the autumn of 1908 to consider the further measures to be taken to stamp out this dreadful enemy to the life and happiness of mankind.

Canada in common with the rest of North America, perhaps we should say the whole civilized world, has participated in the renewed and increased activity which resulted from the deliberations of the congress.

Never since the organization of the Canadian Association for the Prevention of Tuberculosis has there been such activity displayed in Canada in this fight for life. Older branch associations have been reinvigorated, new associations have been formed which are showing in many cases a vigorous activity. Several new institutions for the relief and treatment of consumptives have been opened and the demand for our literature has been larger than ever. Take it all in all 1909 was a year of great progress in the work of the Association.

The Tenth Annual Meeting will be held in Montreal on the 7th of June next and preparations are being made to make this one of the best, if not the best meeting in the history of the Association.

PRESENTATION TO THE ACADEMY OF MEDICINE

Mr. John Ross Robertson, with his usual liberality, recently presented to The Academy of Medicine a splendid picture of the late Dr. C. J. Philbrick. The picture bears the following inscription: "Cornelius James Philbrick, born at Colchester, Eng., May, 1816, came to Toronto about 1851, was Professor of Surgery at Trinity College. He was an old resident of Yorkville. Died December 2nd, 1885." The thanks of The Academy are certainly due to Mr. Robertson for this further manifestation of his good will.

THE Canadian Medical Exchange, Janes Building, this city, conducted by Dr. Hamill, Medical Broker, wishes us to announce that he has from ten to twenty rural villages without a doctor, where the people have asked him to send them one. From the amount of territory without opposition, a practice of from two to three thousand a year could certainly be expected. He will be pleased to pilot any physician who is looking for a location to these places. This is also a good time of the year for physicians who desire to sell their practices to list them with him, as he has a number of bona-fide buyers registered.

BOOK REVIEWS

Diagnostic Therapeutics. A Guide for Practitioners in Diagnosis by Aid of Drugs and Methods other than Drug-Giving. By ALBERT ABRAMS, A.M., M.D. (Heidelberg). Consulting Physician to the Mount Zion Hospital and the French Hospital, San Francisco; formerly Professor of Pathology and Director of the Medical Clinic, Cooper Medical College (Medical Department of Leland Stanford Junior University), San Francisco. Naturam Morborum Curationes Ostendunt. With one hundred and ninety-eight illustrations. New York: Rebman Company, 1123 Broadway.

This work is perhaps one of the most interesting that has reached us in quite a time. As the author says in his preface, "This is neither a work on Therapeutics nor on Diagnosis, but an attempt has been made to conciliate both subjects with a special object in view." The volume is "A guide for Practitioners in Diagnosis by aid of drugs and methods other than drug-giving." The book covers in all over one thousand pages, and contains 198 illustrations. It is divided into six chapters as follows: "Diagnosis and Treatment," "The Interfering Action of Drugs in Diagnosis," "Diagnostic Pharmacotherapy," "Methods other than Drug-Giving in the Diagnosis of Disease," "Etiologic-Diagnostic-Therapeutics," and "The Diagnosis of Visceral Sufficiency."

The author shows himself to be "neither a therapeutic optimist nor a pessimist, and believes that more accurate clinical observations by means of objective signs would more surely establish a rational system of therapeutics." The author goes on to state that, in the presence of a sick man, there are two questions to be answered, as Sir William Jenner said: What is the matter with him? and What will do him good?

Perhaps one of the most interesting chapters in the entire

volume is that dealing with "The Interfering Action of Drugs in Diagnosis" and "Drugs in Etiology of Disease."

The book can be thoroughly commended to medical practitioners, as it is full of information that must prove of most practical benefit to every day practitioners.

W. A. Y.

Handbook of Diseases of the Ear. For the use of Students and Practitioners. By Richard Lake, F.R.C.S. Eng.. Surgeon, Diseases of Ear, etc., London School of Clinical Medicine; Surgeon Royal Hospital. With four colored plates and 66 original illustrations. London: Bailliere, Tindall and Cox, 8 Henrietta St., Covent Garden. This book can be procured from the Canada Law Book Company, 32-4 Toronto St., Toronto, at 40 per cent. discount.

This well known book of Lake's has now reached the third edition. It comprises 250 pages of matter dealing exclusively with the ear. There are 66 well chosen illustrations. The book is very easy to read and one that is sure to be appreciated by students and practitioners, for whom it is especially written.

P. G. G.

Recent Medical Books.—Messrs. Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, London, publish in this issue a most interesting announcement regarding some of their recent medical works. This firm has for many years been publishing medical books, and hold a reputation second to none for getting out works whose authors are of the highest reputation. Some of the books recently published by this firm include Jellett's "Manual of Midwifery," Munro Kerr's "Operative Midwifery," Politzer's "Diseases of the Ear," Walsh's "Rontgen Rays in Medical Work," Tredgold's "Mental Deficiency," Axenfeld's "Bacteriology of the Eye," Brand and Keith's "Clinical Memoranda."

The works published by Messrs. Bailliere, Tindall & Cox can be procured through any of the medical book houses in Canada, including Messrs. J. F. Hartz Company, Ingram & Bell, Limited, Vannevar & Co., and others.

The Canadian Journal of Medicine and Surgery

A Journal published monthly in the interests of Medicine and Surgery

Vol. XXVIII TORONTO, JUNE, 1910 No. 6

Original Contributions

THE DIFFERENTIAL DIAGNOSIS OF CEREBELLAR TUMOURS

ERNEST JONES, M.D., B.S. (LOND.), M.R.C.S. (ENG.), M.R.C.P. (LOND.), D.P.H. (CANTAB.),

Demonstrator of Psychiatry, University of Toronto. Pathologist to the Toronto Hospital for the Insane.

THE problems relating to the diagnosis of intracranial tumours are matters no longer of theoretic interest only, but of urgent practical importance. This is so because in every case the question of operation, whether with a radical or a palliative object, arises, and in few conditions does success in treatment depend more closely on accuracy in diagnosis than it does here. In no condition so desperate as that of intracranial tumour have the results of treatment shewn in recent years a more marked and sustained progress, and at the present time they compare by no means unfavourably with those obtained in the case of intra-abdominal tumours. In order to secure still better results improvement is necessary on the part of both the diagnostician and the operator; it is only with the former possibility that this paper is concerned. It is very rare that a physician can attain to any high degree of skill at the same time in the niceties of neurological diagnosis and in the elaborate technique of intracranial surgery, so that collaboration is usually necessary between the neurologist and the surgeon. The surgeon demands that the diagnosis be made as *accurately* as possible, so

that his task is thereby simplified, and as *early* as possible, so that operation may be undertaken while the patient's general health is yet unimpaired and before the tumour has extended so far as to render hopeless the attempt at removal. Intracranial tumours are sufficiently common to make it necessary to bear them in mind as a possible diagnosis in every case of nervous disease, as is illustrated by the fact that I have myself examined sixteen cases of this nature in the past twelve months only.

In the present paper I do not propose to describe any individual cases, but shall merely offer some general remarks concerning the differential diagnosis between tumours of the cerebellum and those elsewhere in the cranial cavity, paying most attention to the difficulties that are greatest in actual practice. These remarks are mainly based on a study of some twenty cases of cerebellar tumour I have observed in the past few years. Most of them were operated on, several by Sir Victor Horsley.

It will save much repetition if I first give a rapid review of the symptoms that are most characteristic of cerebellar tumour, and then consider the differential points later. I will omit the indirect signs produced by pressure of the growth on neighboring structures. The *general* symptoms of intracranial tumour are usually very pronounced when this is situate in the cerebellum. The headache, which is invariably confined to a sagittal plane, is severe; the optic neuritis is early and rapid in onset and intense in character, and the vomiting and vertigo are frequently very distressing. Besides the general feeling of giddiness and unsteadiness that may occur with any intracranial tumour, we here meet with a special form of vertigo that consists in a peculiar sense of lateral rotation. On closer investigation we find that to the patient both his own body and external objects seem to be turning in the same direction —away from the side of the lesion.

The *attitude* and *gait* shew the following features. The head is held in a position of lateral flexion, the ear on the side of the lesion being approximated to the corresponding shoulder; the head is drawn backwards and is also rotated so that the face looks away from the side of the lesion. These three features make up what is called the cerebellar attitude. When standing the patient is unsteady, though more so subjectively than objectively; the unsteadiness is not appreciably increased on shutting the eyes, so that Romberg's sign is absent. The patient stands with a broad base and

rests his weight chiefly on the leg of the side opposite to the lesion. There is frequently present a considerable degree of lordosis. The gait has two special features. The patient reels as if drunk and tends to stagger and fall over on to the same side as the lesion. Again, in walking towards a given point, he gradually deviates from the appointed direction, describing a path that is curved, with the concavity on the side of the lesion.

The *ataxia* of cerebellar disease is peculiar in being of the dynamic variety, thus differing from the static ataxia of, for instance, tabes or peripheral neuritis. It is, in other words, a dysmetria, being due, not to a lack of precise information from the periphery as in these diseases, but to a defect in the central regulating mechanism of co-ordination. It is, therefore, not dependent on, and indeed is usually unaccompanied by any sensory changes or any diminution in acuity of the "muscle-sense." The ataxia is always more marked in the upper than in the lower limb, and is usually confined to the homolateral side. It is manifested in several ways. During the performance of such an act as pointing to an object, or touching the tip of the nose, irregular inco-ordinate movements appear. Sometimes they have a tremor-like character, but they differ from an intention tremor, such as occurs in insular sclerosis, by not increasing towards the end of the act, and in disappearing as soon as this is completed. Indeed, a limb that is maintaining a fixed attitude, such as being held out straight, is held frequently preternaturally steady, a point to which we shall later refer. The carrying out of a complex movement frequently shows a defect that Babiński has termed "cerebellar asynergy." For instance, if the patient is told to straighten a lower limb that is flexed at both hip and knee joints he will extend first the leg and then the thigh, and not both simultaneously as in the normal. Again, he is unable to carry out any rapidly reciprocating movements, a symptom known as dysdiadochokinesia. Also this occurs on the same side as the lesion, so that, for instance, the patient cannot rotate his hand by the alternate movements of supination and pronation so rapidly on this side as he can on the opposite side, and he will frequently compensate for this incapacity by rotating the arm at the shoulder-joint when he is tested in this way.

A cardinal side of cerebellar disease is *hemi-paresis*. This paresis altogether differs from that produced by cerebral disease, or from that produced by interference with the pyramidal tracts. It

is distinguished by being more pronounced in the trunk than in the limbs, and in the lower than in the upper limb, by never affecting the face, by being of a flaccid and not a spastic type, and by being unaccompanied by pain or any other sensory disturbance. Further, there are none of the changes in the reflexes so characteristic of pyramidal affections, such as ankle clonus, heightened activity of the deep reflexes, abolition of the abdominal reflexes, inversion of Mendel's reflex, and the appearance of Babinski's plantar sign and its allies, the "fan" sign, Oppenheim's, Schäfer's and Remak's signs. The *hypotonia* that accompanies this paresis is a highly important differential sign. It is shown by the diminished resistance to passive movements, by the flaccid feel of the muscles and the greater mobility of the joints. Special tests by which it can be revealed or estimated are: the extent to which passive hyperextension at the knee is possible (the knee-angle sign), the extent to which the seventh cervical spine descends below the level of the great trochanter when the patient tries to touch his toes without bending his knees, and by a useful test applied most conveniently with the forearm in the following way: If someone is powerfully flexing his forearm against resistance and we suddenly remove this resistance, the forearm will flex to a certain extent and will then recoil. If cerebellar ataxia is present then the forearm will continue to flex even to the maximum possible extent, and there will be no recoil. It is important to remember that the hypotonia of cerebellar disease differs from other forms in not being correlated with absent knee-jerks.

Of the *eye-symptoms* three are of especial importance: nystagmus, sixth nerve weakness, and skew deviation. Cerebellar nystagmus is characterized by being most marked when the patient looks towards the side of the lesion, in this respect differing from nystagmus of labyrinthine origin, by being of a slow and rather coarse kind, and in sometimes being more marked in the homolateral eye. It is practically always lateral in type. The paresis of the sixth nerve is an exceedingly frequent symptom; there is commonly also a dissociated paresis of the opposite internal rectus muscle so that it is weak in lateral movement of the two eyes, though not in convergence. In the latter case there may be a secondary conjugate deviation of the eyes away from the side of the lesion, a symptom of much greater significance than isolated affection of the sixth nerve. There are several kinds of skew devia-

tion of the eyes. The commonest is the Magendie type, in which the homolateral eye looks downwards and inwards and the contralateral eye outwards and slightly upwards. It is usually a temporary phenomenon and, therefore, has carefully to be watched for.

The general characteristics of cerebellar tumours are further worth remembering, namely, the tendency of the symptoms to progress in definitely marked-off steps, and the continual variation in the activity of the deep reflexes.

If I were asked to place the above-mentioned signs in order of their diagnostic value I should do so as follows: First ataxia, then the characteristic vertigo, the hypotonia, paresis, nystagmus and skew deviation. With this clinical picture in mind we may next consider some of the problems of differential diagnosis that most frequently arise.

Of *superatentorial* tumours those that give rise to the greatest difficulty in this respect are tumours of the frontal lobe, of the optic thalamus, and of the corpora quadrigemina. It is uncommon for a cerebellar tumour to be confounded with one in the parietal, temporal or occipital lobe. It can be thought to be situate in the *Rolandic area* only if the observer mistakes for an attack of *petit mal* one of the giddy spells that occur in cerebellar disease, and which sometimes gravely impair consciousness. In cerebellar attacks, however, there are never any local twitchings, as there are in the Jacksonian attacks; even in the true cerebellar fit there is no clonic stage, only a tonic condition of the muscles that lasts for a variable time. The subsequent paralyses are also of a totally different kind in the two affections.

A *parietal* tumour may occasionally be a source of embarrassment in diagnoses. It gives rise to a lack of dexterity in the limbs, which, however, is due to an astereognosis, or sometimes to sensory asymbole, and so is quite different from cerebellar ataxia. When the tumour extends far back in the parietal lobe it may produce conjugate deviation of the eyes, but in such a case there will probably be present a contralateral homonymous hemianopsia or else a mind-blindness for objects, together with evidence of visual aphasia.

Frontal tumours give rise to many symptoms resembling those of cerebellar tumours. In both cases there may be present nystagmus, conjugate deviation of the eyes, speech disturbance, unilateral tremor of the limbs, and even the so-called cerebellar attitude of

the head. The conjugate deviation of the eyes in frontal tumour is, however, an irritative phenomenon, not, as in cerebellar tumour, a paralytic one, and the two can thus be readily distinguished. The speech disturbance is of a different kind, being aphemic and not dysarthric. The tremor has a different character, being very fine and rapid; there is never present the typical cerebellar ataxia, though in making this observation care must be taken not to confuse the motor apraxia of frontal disease with the ataxia of cerebellar. Hemiparesis, when present, is on the opposite side and is of the cerebral type, with spasticity and the characteristic changes in the reflexes. Symptoms, such as anosmia, apraxia, bitemporal hemianopsia, agraphia and motor aphasia, may occur that are never found with cerebellar tumour, and on the other hand cerebellar symptoms, such as the typical gait, forced vertigo, hypotonia, lordosis, and skew deviation of the eyes, are not found in cases of frontal tumour.

Tumours of the *optic thalamus* can very easily be mistaken for cerebellar tumours, and a case well illustrating this fact was recently reported by Dr. Heggie and myself to the Ontario Academy of Medicine. The hemi-paresis is slight, and still more striking is the fact that it is hypotonic. Vertigo and the cerebellar attitude of the head may occur, and further the involuntary irregular movements that constitute a cardinal sign of thalamic lesions are sometimes very hard to distinguish from cerebellar ataxia. However, with tumours of the thalamus there are always pronounced sensory changes, particularly loss of deep sensation, and marked irritative symptoms, such as pain and paresthesia. Implication of the third nerve nucleus is common, most often manifesting itself as a bilateral mydriasis. Further, in all the cases of thalamic disease so far reported there has been some implication, however slight, of the motor part of the internal capsule, so that changes in the reflexes indicative of a pyramidal affection are present. In the resulting hemiparesis the facial muscles are affected in a peculiar way, in that mimetic movements are more paralyzed than volitional ones.

It is sometimes impossible to distinguish a tumour of the *corpora quadrigemina* from one of the cerebellum. A few points of value are that the deafness is an early symptom and not a late one, as in cerebellar disease, that it is on the side opposite to the tumour, that the affection of the third nerve, causing most often external ophthalmoplegia, is one of the first signs, that hemianopia

may occur, and that the ataxia and tremor are frequently bilateral. Paresis when present is frequently bilateral, and is always spastic, being due to implication of the pyramidal tracts.

The difficulties of distinguishing cerebellar tumours from other *sub-tentorial* tumours are even greater than in the case of supratentorial ones, and here accuracy in localization is of vital importance because on it depends the operability of the case. Tumours of the *pons* and *medulla* are relatively easy to distinguish. The optic neuritis is late in appearing, and the general symptoms are not pronounced. Vertigo and ataxia may occur, but not of the cerebellar variety. The sphincters are frequently affected, and there are often vaso-motor and respiratory disturbances. The paralysis may be on one or both sides of the body, but is always spastic and is accompanied by evidences of affection of the pyramidal tract, such as Babinski's plantar sign, etc. The lower cranial nerves are always affected, and in very characteristic ways. The paralysis of them is intense and permanent, and is often bilateral. The nerves affected are grouped according to anatomical features. Bilateral paralysis of conjugate movements of the eye is a frequent symptom, but not skew deviation or typical nystagmus. When the lowest group of cranial nerves is implicated, then there will be present a crossed paralysis of one of the four recognized types, named after Avellis, Hughlings Jackson, Schmidt and Tapia respectively. The speech disorder cannot be told from that found with cerebellar disease.

Tumours of the angle between the pons and cerebellum, called the *cerebello-pontine angle*, are hardest to distinguish from cerebellar tumours. It is an important diagnosis to make, for, as Frazier has well shewn, the route of operation should be quite different in the two cases. Thanks to the observations of Holmes, Stewart and Weisenberg, we are now in a position to make the diagnosis in the majority of cases. Tumours of the cerebello-pontine angle are of two kinds. They grow either from the pia covering the under surface of the cerebellum, or more often from one of the middle group of the nerves in the posteria fossa, usually the eighth. They are most often fibromata, frequently with myxomatous degeneration, but sarcomata and endotheliomata are also met with here. They tend to press more on the middle peduncle of the cerebellum than on the pons, and hence clinically resemble cerebellar tumours more closely than pontine ones. The most im-

portant sign of tumours of the cerebello-pontine angle is the early and intense affection of cranial nerves. The seventh and eighth nerves are practically always paralyzed, and frequently also the fifth, sixth and tenth. When the tumour presses on the cerebellum or its peduncle then typical cerebellar ataxia and gait, homolateral paresis and hypotonia will occur. The paresis and hypotonia are, however, only very slight. A contralateral paresis due to pressure on the pyramidal tracts is common; this will, of course, be spastic and will shew the characteristic changes in the reflexes, such as Babinski's sign, etc. When this spastic hemiplegia is present the patient will in standing rest his weight on the homolateral leg, and not, as in cerebellar tumour, on the contralateral. Two other valuable signs may be mentioned. First, a coarse tremor is frequently present in the homolateral arm when it is held out horizontally, whereas, as was mentioned above, this arm is held preternaturally steady in cerebellar tumour, provided no hydrocephalus is present. Secondly the feeling of subjective rotation is towards the side of the lesion, whereas in cerebellar tumour it is towards the opposite side.

Before concluding I might add a few remarks on the important practical question of how to determine the side of the lesion, once its site in the cerebellum is known. This is a matter that frequently causes considerable embarrassment, but the following points are of service in helping one to decide. The general rule is that every symptom of cerebellar tumour is either confined to, or most marked on, the same side as the lesion, but there are several fallacies of observation that have carefully to be guarded against. For instance, the patient as a rule tends to deviate towards the side of the lesion when asked to walk towards a given point. Later in the course of the disease, however, he becomes aware of this tendency and tries to counterbalance it. In so doing he advances with the shoulder on that side higher than and in front of its fellow, and we are thus able to detect the process. It may often be observed that on good days he actually over-compensates this defect and deviates towards the opposite side, a fact that easily leads to a false conclusion, whereas on bad days he deviates towards the side of the lesion. Again, although the symptoms of cerebellar tumour are, as a rule, paralytic in nature, yet occasionally they may be irritative, and will then be in the reverse direction. The cerebellar attitude of the head is notoriously misleading in this respect, for

when it is due to irritation the head is in the opposite position to the one that was described above in this connection. A similar remark applies to the direction of the skew deviation of the eyes. Further, the increase of general intra-cranial pressure that is so great in these cases may give rise to false localizing signs that are frequently on the opposite side to the lesion. As is well-known, the paralysis of the sixth nerve is particularly unreliable in this respect, and I have several times seen it occur on the opposite side to the tumour. The signs on which one can most rely to determine the side of the lesion are as follows: The ataxia, hypotonia and cerebellar paresis are invariably most marked on, and often confined to, the side of the tumour. The movements of the nystagmus are slower and have a wider range in the direction of the lesion than in the opposite direction. The homolateral arm is held extended more steadily than the contralateral one. Lastly, when the patient is rotated in a chair and the movement is suddenly stopped, the sense of subjective rotation is less intense and the succeeding eye deviation and nystagmus are less marked when the chair has been rotated towards the affected side than towards the other. Here, however, as elsewhere in localization diagnoses, care should be taken not to lay excessive stress on any single symptom, but to attach different standards of value to the different symptoms and then to make a diagnosis on the general clinical picture present.

GALLSTONES

DR. J. M. ROGERS, INGERSOLL, ONT.

PERHAPS an apology is due the members of this Association for trespassing upon their time with a paper on a subject so common as gallstones, but the very frequency of its occurrence and the difficulties which seem to exist in many cases in arriving at a diagnosis must be my excuse for so occupying your attention.

It is quite true that gallstones are present in many people without producing any symptoms, and without exciting any suspicion of their existence. Statistics tell us that in people under the age of twenty years gallstones are present in two or three per cent. Over twenty years in about ten per cent. Only in a small proportion of these cases do they cause symptoms that demand the attention of the physician. The early recognition of the pathologic condition produced by calculi is necessary if one would avoid the serious results which frequently follow neglected cases. Without considering the more remote complications which are produced in long-standing cases, one has but to think of the inflammatory action in the immediate vicinity of the gall bladder and bile ducts to form some appreciation of the irreparable damage which results. We all know of the danger of adhesion of the gall bladder to neighboring organs after repeated attacks of cholecystitis. The stomach and duodenum seem to be the organs which are most frequently found attached to the gall bladder. From such attacks the bile ducts themselves perhaps suffer the most. In these neglected cases stenosis of the cystic duct is often seen, and occasionally we have as well stenosis of the common duct. This was very well illustrated in a case which came under my notice some time ago. The patient, Mrs. N., age 35, had been for about fifteen years suffering from what was diagnosed as indigestion. At times she would remain quite well apparently, but every month or so would have a "dyspeptic" attack. Some time before I saw her her physician suspected that she had a "gastric ulcer." She frequently had attacks of vomiting and occasionally vomited blood. When I saw her she was very anemic and had a somewhat yellow tinge, but did not at that time have any typical gallstone attacks. Later on the jaun-

dice became more marked, and as medical treatment seemed to be of no avail, an operation was advised. Assisted by Dr. Parke, of Woodstock, I made an incision and found the gall bladder quite adherent to the pylorus. The adhesions were with some difficulty broken up, the gall bladder was opened, and I found a small quantity of black fluid mixed with bile. Some small concretions like sand were scooped out, and with some difficulty a probe was introduced into the cystic duct. An attempt was made to pass the probe through the common duct into the duodenum, but this was found impossible. I made a digital examination of the common duct, but could detect no stone, and as the patient was not in very good condition we decided not to proceed further, but simply to drain. There was not a very free flow of bile through the tube, but sufficient to cause her jaundice to lessen considerably, and she was able to take food with comfort. She left the hospital much improved, and in about a month from the time of her operation the fistula closed. The improvement in her condition did not continue, and after four or five weeks had elapsed a second operation was advised, with the object of dilating the common duct if possible and removing the gall bladder. She refused any further operative interference, however, and gradually sank. An autopsy was performed, when the liver was found to be somewhat enlarged, and the stricture in the cystic duct again contracted, a small quantity of bile being found in the gall bladder. The common duct contained no stone, but was very much contracted, its walls much thickened, and it was with difficulty that a very fine probe was passed. There seemed to be no doubt that the strictures were the result of injuries sustained on account of the former presence of gallstones. This condition of stricture of the common duct does not seem to be very common. Mayo Robson reports a case in which he had to make a new passage for the bile by doing a cholecystenterostomy, which was quite successful. I have no doubt that had the condition here been recognized several years before and an operation performed the stenosis of the common duct would have been avoided, as well as the fatal result of my unsuccessful operation.

It would be interesting in considering this subject to inquire into the conditions favoring the formation of gallstones. That most gallstones are composed almost entirely of cholesterin is an undisputed fact, but the origin of this substance is still somewhat obscure. It is thought by some to be formed in the gall bladder

and bile passages, but it may be found in other mucous passages as well. Cholesterin is held in solution by the bile salts, and the diminution of these may account for its precipitation, and as a result we have a splendid nidus for the formation of a calculus. A large increase in the amount of cholesterin present probably favors the formation of gallstones. As the bile salts are produced by the metabolism of nitrogenous foods, one would expect that meat-eaters would suffer less from this affection than others. That this is so, to some extent at least, seems to be proven by the fact that in Germany there is a larger percentage of this affection than in England, where so much meat is consumed. Stagnation of the bile contributes to the formation of gallstones, and consequently any habit of life which favors this stagnation should be avoided. There can be no doubt that the indolent life led by many fleshy women and some stout men favors the formation of these concretions.

The bacterial origin of gallstones is now most generally admitted, the organism most often found being the bacillus coli communis and bacillus typhosus. The staphylococci and streptococci have also been found capable of causing calculi.

In the Johns Hopkins Hospital about thirty-three and one-third per cent. of the operations performed for cholelithiasis gave a history of typhoid fever.

Experiment has shown that a foreign body when placed in the gall bladder of a guinea pig may stay there indefinitely without producing any inflammatory action or precipitating the salts. If, however, these bodies were previously infected with virulent microorganisms, they would produce inflammatory action and precipitation of the salts. An interesting fact about this, however, is that this sediment shows no tendency to cohere. The bacteria must be attenuated before they will cause the adherence of the sediment to foreign bodies.

If one bears in mind the bacterial origin of gallstones, and remembers too that anything which interferes with the free discharge of bile has a tendency to promote their formation, one will easily see that constipation must be regarded as a contributing cause in this affection. If the peristaltic action of the bowels is abnormally low and the secretions in the mucous glands reduced, it naturally follows that a smaller amount of bile passes into the intestines. Partly on account of want of stimulation, but also on account of

the congested condition which exists in the mucous membrane of the bile ducts, the passage of the bile is impeded, and in this way stagnation is produced.

In cases of chronic cholangitis minute casts from the small bile ducts in the liver find their way into the gall bladder and there become the nuclei for gallstones.

How frequently one notices that gallstone affection is associated with numerous other pathologic conditions. The reason for this is somewhat difficult to determine. That such is the case must be, I believe, the experience of most of us. In two cases which have come under my notice recently there was presented a similar train of symptoms. Mrs. B., age 32, presented herself at my office suffering from pain, which was continuous in character, and situated in the right loin. Her temperature was 100, pulse 95. Upon making a hurried examination, a mass was found in the right iliac region, and, although the walls were very thin, it was found impossible to make a thorough examination on account of the rigidity and excessive tenderness. She gave a history of repeated attacks of indigestion, for which she had had treatment frequently. She had lost a great deal of flesh in the last two or three years, and suffered very greatly from headaches and backaches. Upon making a vaginal examination an enlarged retroflexed uterus was discovered, which, too, was quite tender on pressure. The cervix was severely lacerated and the perineum very much relaxed. She was taken to the hospital and placed under an anesthetic, when it was found that the tumorous mass which presented quite distinctly upon her previous examination in my office had entirely disappeared. This somewhat confused my diagnosis of an appendix containing pus, and, having in mind the possibility of a dilated gall bladder, I made an opening to the right of the rectus, high up, and discovered a very much elongated and distended gall bladder coming down over the appendix and adherent to it. The adhesions were broken up, the appendix removed, the gall bladder opened and some three hundred calculi removed therefrom. A probe was passed into the common duct and the gall bladder sutured to the abdominal fascia. The bile soon flowed freely through this opening, but at the expiration of two or three weeks the fistula had not closed. She was then placed under an anesthetic, the cervix and perineum were repaired and the uterus brought forward and held in position by a shortening of the round ligaments. At the same time the edges of

the fistula were scraped, and the fistula itself was swabbed out with a solution of argent. nit. The patient made a good recovery, but the fistulous opening still continues, and I am of the opinion that a gallstone in the common duct has escaped detection. The patient is in good health and is entirely free from pain.

A second case very similar to this was Mrs. J., age 27. Three years ago a difficult confinement left her with a torn uterus and perineum. For some two years she attempted, by means of tonic and rest, to avoid an operation for their repair, which she was told she must have. She became very nervous, and during the last six months complained of pains in different localities, more severe, however, over McBurney's point and in the region of the gall bladder. These attacks of pain became very severe at times, when I was asked to see her. She had been prescribed for by at least half a dozen different physicians during the two years of her ill-health, but none of them had ever made a diagnosis of gallstones. The pain in the region of the gall bladder was attributed by some to indigestion, by others to the retroflexed uterus, which also existed. She consented to an operation, and, assisted by Dr. Parke, I repaired the cervix and perineum, fastening the uterus forward by Gilliam's method; the appendix was at the same time examined and found constricted at one point. As she had complained of considerable pain here, it was thought best to remove it. Though the patient had been under the anesthetic for a prolonged period, I determined to examine the gall bladder, as she had assured me I had to do everything at the one operation. Gallstones were found, and as quickly as possible removed and drainage established. The patient suffered severely from shock, but after recovering from this progressed very rapidly, and has gained about thirty-five pounds in weight and is feeling well.

Just why gallstones sometimes complicate these cases is not easily explained. I believe, however, that the reason most probably is that a retroflexed uterus or an inflamed appendix so interfere with normal conditions of health as to produce marked changes in the secretions, and that the bile is so influenced as to make the probability of gallstones being formed much greater than it otherwise would be.

Has it ever occurred to anyone that heredity had any influence in the causation of gallstones? That it has I am not prepared to say but I have noticed from time to time that members of the same

family suffer from this condition. At the present time I have under my care a patient who is suffering from gallstones. A few months ago I assisted at an operation on his sister, from whose very much thickened gall bladder three stones were removed. This woman's daughter has had several attacks of gallstone colic, and her sister is at the present time suffering from the same disease. This is at least suggestive, and is perhaps the most marked of any of the cases which have come under my notice.

Briefly the symptoms of gallstone colic are severe pain coming on suddenly and paroxysmal in character, and often accompanied by rigor. The seat of the pain is usually in the right side on a line between the ninth costal cartilage and the umbilicus. In occasional cases the pain is found to be on the left side, and in these conditions Mayo Robson states that he has usually found adhesions existing between the gall bladder and the stomach. After the pain disappears the tenderness in the region of the gall bladder is usually very marked. Vomiting frequently comes on, but is usually late in the attack and frequently is a sign of the termination of the seizure. Jaundice is presented in some of the cases, but usually is not seen until some time after subsidence of the attack, and in many cases is entirely absent, so that while present it is a valuable sign, yet the fact of its being absent does not by any means contraindicate gallstones. In severe colic collapse is often seen, sometimes so severe as to make one think of perforation of bowel or stomach.

In arriving at a diagnosis of this disease, one does well to bear in mind those affections with which it is most frequently confused. There are very few patients suffering from gallstones who have not been told at one time or another that the trouble was dyspepsia or indigestion or flatulent colic, and in many cases of dyspepsia it is very difficult to exclude gallstones, as the two are so closely associated. In acute dyspepsia, however, the pain is confined to the region of the stomach rather than of the gall bladder. The painful attacks can usually be traced to the ingestion of unsuitable food. In dyspepsia relief can be much more easily obtained by suitable treatment. Appendicitis is frequently confused with gallstones. In typical cases of appendicitis there would be, of course, little difficulty, but we all know how varied are the symptoms accompanying appendiceeal attacks. The pain may be high up; in fact, in many cases the only pain and tenderness complained of

at first is in the region of the stomach. Over McBurney's point one may press pretty deeply without causing the patient to complain. At the expiration of twenty-four hours, however, this cannot be done, and the excessive soreness seems to be transferred from the epigastric to the right iliac region. Rise of temperature, early vomiting and absence of pain in the right scapular region, point to the existence of the appendicitis. One must bear in mind, too, the frequent occurrence at the same time of cholelithiasis and appendicitis, as has been pointed out by Dr. Ochsner, of Chicago. Renal calculus frequently simulates gallstone colic, but here, if care be taken in the examination of the urine, one is usually able to detect blood cells after an attack of pain. Movable kidney sometimes gives rise to pain similar to that of gallstones, and where the kidney passes over to the median line it is quite often mistaken for a distended gall bladder. If, however, a distended gall bladder is free from adhesions it may usually be distinguished from a movable kidney by the possibility of swinging it from left to right. Where adhesions are present this cannot be done, and occasionally the diagnosis is made extremely difficult. Duodenal and gastric ulcer must also be thought of, and here we must rely upon the association of pain with food. In duodenal ulcer pain occurs two or three hours after ingestion of the food. In these cases it must not be forgotten that occasionally the common duct is involved in the inflammatory action which occurs and jaundice is occasioned. The occurrence of this is likely to deceive us and point to gallstones, if we are not on the alert. In malignant growths reliance must be placed upon the gradual onset, loss of weight, and gradual but continual loss of strength. In these cases usually the jaundice is persistent, and this fact alone should cause one to be very suspicious. Acute and chronic pancreatitis frequently simulate gallstones. The tenderness and pain here are usually to be found in the epigastric region rather than to the right of it. It is often impossible to diagnose acute pancreatitis from cholecystitis, but fortunately drainage of bile ducts is the proper treatment in both cases.

Hysteria, of course, must not be forgotten. In these cases the nervous make-up of the patient, pains in other parts of the body, and absence of jaundice will aid very much in the diagnosis.

Clifford Albut has drawn attention to hepatalgia as a disease which is frequently confused with gallstones. "This malady," he

says, "is usually mistaken for gallstone colic, and in one case an operation was performed under the erroneous impression. The attacks last from a few minutes to a few hours and may end in vomiting.

Having decided that we have a case of gallstones with which to deal, what plan shall we adopt? I shall not attempt in the time at my disposal to go fully into the treatment of the disease, but in a word might say that in the first place medical treatment should be given a fair trial, as in many cases it will be successful. Dieting with systematic exercise, accompanied by the taking of large quantities of water, has cured many a case of cholelithiasis. I have not the slightest doubt that if physicians encouraged their patients to drink water in larger quantities there would be fewer cases of gallstones and less necessity for operations. Perhaps the drinking of large quantities of fluids should be looked upon rather as a prophylactic than a curative measure, as there can be no doubt that a small amount of fluid in the body will have the effect of causing a thickening of the bile and thus more likelihood of the cholesterin being deposited and gallstones being formed.

Then, too, one must remember that there is such a thing as spontaneous cure of gallstones. The stone or stones may, of course, escape from the ducts, thus terminating the attack and clearing the gall bladder, or, as happened in a case of mine not long since, the gall bladder became adherent to some portion of the intestine, probably the duodenum. A fistulous opening was established between the bladder and duodenum, and the stone, which apparently was the only one present, passed through this opening into the intestine, and was recovered per rectum.

My patient, Mrs. M., age 47, had what was supposed to be congestion of the liver in 1896. At that time there was considerable swelling over the region of the liver. For eleven years no further attacks occurred, when on July 1, 1907, she became ill with what seemed like an attack of indigestion. There was no severe pain, but over the right epigastric region there was a fullness which she said resembled gas on the stomach. There was no nausea or vomiting, and after four or five days of this "uncomfortable" feeling, this stone, which weighs a drachm and a half, and measures slightly over three inches in circumference, was passed per rectum.

Should medical treatment fail, however, in producing a cure,

one should have no hesitation in recommending operative interference, and the operation par excellence is a cholecystotomy. In many cases, however, it is impossible before making the incision in the abdominal wall to determine just what operation is necessary, and one should never open a gall bladder who is not prepared to do anything in that region which may be found necessary.

In certain cases removal of the gall bladder will be advisable. In the following conditions the elasticity and contractility of the viscus is irreparably gone, and a cholecystectomy is indicated.

1. In cases where adhesions to stomach or bowel are numerous and likely to recur after being broken down.
2. A gall bladder with very much thickened walls, due to a long-continued cholecystitis.
3. Stricture of the cystic duct.
4. Gangrene.
5. Perforation.
6. Empyema.

While there are some surgeons who contend that a gall bladder should never be removed,. because, as one says, we never know when the occurrence of malignant disease in the common bile duct or pancreas will make it necessary for us to use the gall bladder in doing a cholecystenterostomy, yet the cases in which this might be necessary are obviously so few that I think we may safely dismiss the objection.

Society Proceedings

THE CANADIAN MEDICAL ASSOCIATION

THE forty-third annual meeting of The Canadian Medical Association opens in this city on the first instant under the Presidency of Dr. Adam H. Wright, of Toronto.

The meeting takes place in the Convocation Hall of the University of Toronto, and judging from the following splendid list of addresses and papers, the 1910 meeting should be one of the best on record:

Address—Dr. W. A. Evans, Chicago.
Address—Dr. Charles E. North, New York, and others.
Symposium on Exophthalmic Goitre—Medical Aspect, Prof. McPhedran, Toronto; Surgical Aspect, Dr. F. J. Shepherd, Montreal.
Symposium on Psycho-Neuroses—Dr. J. J. Putnam, Boston; Dr. August Hoch, New York; Dr. W. Hattie, Halifax; Dr. Ernest Jones, Toronto. Discussion by Drs. C. K. Clarke and Helen MacMurchy, Toronto.
The Psycho-Neuroses from the Standpoints of the Neurologist—Dr. Joseph Collins, New York.
Medical Education—Dr. J. C. Connell, Kingston.
Typhoid Carriers—Dr. W. T. Connell, Kingston.
A Discussion of the Causes Interfering with the Regular and Continuous Development of the Child—Dr. A. D. Blackader, Montreal.
Anterior Poliomyelitis—Dr. C. K. Russel, Montreal.
Diphtheria—A. H. Gordon, Montreal.
Title to be announced—Dr. D. A. Shirres, Montreal.
Orthostatic Albuminuria—Dr. Graham Chambers, Toronto.
Treatment of Acne Vulgaris by Vaccines—Dr. Geo. W. Ross, Toronto.
Title to be announced—Dr. R. D. Rudolf, Toronto.
Title to be announced—Dr. A. R. Gordon, Toronto.
Title to be announced—Dr. R. J. Dwyer, Toronto.
Title to be announced—Dr. W. F. Hamilton, Montreal.

Patent Medicines—Dr. John Ferguson, Toronto.

Sudden Attacks of Pain in the Pyloric Region—Dr. Goldwin Howland, Toronto.

A Comparison of the Results in Pulmonary Tuberculosis in Institutions and Private Practice—Dr. J. H. Elliott, Toronto.

The Blood in Pulmonary Tuberculosis—Dr. A. F. Miller, Kentville, N.S.

Experimental Intra-Thoracic Surgery, with a Resume of Recent Progress in the Use of the Differential Pressure Apparatus —Dr. Von Eberts, Montreal.

Gangrene—Dr. E. W. Ryan, Kingston.

Perforation of the Intestines in Typhoid Fever—Dr. Geo. E. Armstrong, Montreal.

Appendicitis in Children—Dr. T. Wood.

Duodeno-choledochotomy, with Report of a Case—Dr. Jasper Halpenny, Winnipeg.

An Interesting Case of Diaphragmatic Hernia—Dr. J. M. Cotton, Toronto.

Fractures about the Elbow Joint—Dr. W. E. Gaillie, Toronto.

Tumor of the Cerebrum, with Presentation of Patient—Dr. Geo. A. Bingham, Toronto.

Title to be announced—Dr. Murray MacLaren, St. John, N.B.

Title to be announced—Dr. Ingersoll Olmsted, Hamilton.

Title to be announced—Dr. Gibson, Sault Ste. Marie.

Title to be announced—Dr. W. G. Turner, Montreal.

Title to be announced—Dr. A. Mackenzie Forbes, Montreal.

The Neurasthenic Conditions: Referable to the Eye, Ear, Nose and Throat—(*a*) The Eye, Dr. R. S. Minnes, Ottawa; (*b*) The Ear, ——; (*c*) Nose and Throat, Dr. Jamieson, Montreal. Discussion by J. P. Morton, Hamilton.

Nasal Polypi—Dr. C. C. McCullough, Fort William. Discussion by Dr. Geoffrey Boyd, Toronto.

The Diseased Tonsil—(*a*) Its Effects upon the General System, Dr. W. P. Caven, Toronto; (*b*) Its Surgical Treatment, Dr. J. G. Sutherland, St. Catharines. Discussion by Dr. Price-Brown, Toronto.

Trachoma—Dr. H. S. McKee, Montreal.

Title to be announced—Dr. R. H. White, Montreal.

Reflex Nasal Neuroses—Asthma, Hay Fever, ——; Paroxysmal Sneezing, Dr. C. M. Stewart, Toronto.
Ectopic Gestation—Dr. Munroe, Saskatoon, Sask.
Obstetrical Technique—Dr. Bogart, Kingston.
Obstetrical Diagnosis—Dr. Little, Montreal.
Title to be announced—Dr. Evans, Montreal.
Early Diagnosis of Uterine Cancer—Dr. A. C. Hendrick, Toronto.
An Attempt to Produce Immunity to Scarlet Fever—Dr. Wm. Goldie, Toronto.
Pericarditis in Children, with X-ray Photographs—Dr. Jos. S. Graham, Toronto.
The Operative Treatment of Congenital Hydrocephalus—Dr. Edward Archibald, Montreal.
Examination of Feces and Urine for Typhoid Bacilli, Especially in Typhoid Carriers—Dr. W. T. Connell, Kingston.
Title to be announced—Dr. C. P. Howard, Montreal.
Title to be announced—Dr. J. J. McKenzie, Toronto.
Title to be announced—Dr. T. G. Brodie, Toronto.
The Estimation of Nitrogen and Ammonia in Urine—Dr. J. B. Leathes, Toronto.
Traucoma Bodies—Dr. W. H. Lowry, Toronto.
Rabies—Dr. J. A. Amyot, Toronto.
Title to be announced—Dr. A. H. Caulfield, Gravenhurst.
A Critique of the Wassermann Reaction and Its Modifications—Dr. J. G. Fitzgerald, Toronto.
On a Modification of the Wassermann Reaction in the Diagnosis of Syphilis and thé Parasyphilides—Dr. Geo. W. Ross, Toronto.
Interpretation of Public Health Laboratory Reports—Dr. D. G. Revell, Edmonton.
The Occurrence of a Fat Splitting Ferment in the Urine in Cases of Pancreatitis—Dr. Edward Archibald, Montreal.
Title to be announced—Dr. C. B. Keenan, Montreal.
Some Notes on the Biology of the Uncinaria Americana—Dr. F. B. Gurd, New Orleans.
Concerning the Development of the Spirocheta Duttoni—Dr. J. L. Todd, Montreal.
Typhoid Meningitis—Dr. W. J. McLachlin, Montreal.
Title to be announced—Dr. S. B. Wohlbach, Montreal

The Action of Drugs on the Salivary and Bronchial Secretions—Drs. A. H. Taylor and V. E. Henderson, Toronto.
Title to be announced—Dr. J. C. Beatty, Gravenhurst.
The Clinical Estimation of the Coagulation of the Blood—Dr. R. D. Rudolf, Toronto.
Biliary Cirrhosis of the Liver—Dr. O. R. Mabee, Toronto.
The Clinical Examinations of Feces—Dr. F. W. Rolph, Toronto.
Congenital Cardiac Disease—Drs. Maude E. Abbott and Joseph Kaufmann, Montreal.

We are in a position to know that our esteemed confrere, Dr. Adam Wright, in conjunction with a splendid Committee of Arrangements, has done a good deal of hard work during the past winter to ensure the success of this meeting. From present appearances, it would seem as if the meeting would be one of the most successful held since the inception of The Canadian Medical Association, and we would strongly urge our readers to immediately arrange for a few days' holiday, making Toronto their Mecca for the next week or so. We think we can bespeak for all visitors, no matter from whence they hail, a hearty reception on the part of their brother practitioners in Toronto. As our readers are aware, the annual fee for membership is $5.00, this amount to include a copy of the Official Journal of the Association, the publication of which, we understand, however, is still somewhat in the dim and distant future. Apart from the scientific side of the meeting, the Entertainment Committee have not in any way neglected their duties, as, on the forenoon of Thursday next, there will be an excursion by steamer "Turbinia" to Port Dalhousie, thence by electric railway to Niagara Falls. Refreshments will be served on the steamer with dinner at the Clifton House, the members returning to Toronto the same evening. There has also been arranged an excursion by special C. P. R. train to Guelph, as guests of the Guelph Medical Society, in order to visit the Ontario Government Farm and other points of interest. This latter excursion takes place leaving Toronto on Saturday next, at 11 a.m.

The General Secretary, Dr. George Elliott, 203 Beverley Street, Toronto, will be found, as usual, on the spot, affording, with his usual courtesy, all necessary information.

The annual meeting of The Canadian Medical Protective Association will be held on Friday afternoon at 5.30, when its

President, Dr. R. W. Powell, of Ottawa, will submit his annual report.

A discussion on Dominion Registration will be opened by Dr. Roddick on the evening of the first day of the meeting, following the address in Medicine.

In addition to the Presidential Address, there will be one in Medicine by Dr. Herringham, of London, England; one in Surgery by Dr. J. B. Murphy, of Chicago, and a third in Obstetrics by Dr. Henry C. Coe, of New York.

The Milk Commission will report on the afternoon of the first day, and several leaders in this field from the United States will contribute to the discussion.

Two Symposia have been arranged, to which the various sections will contribute: one on Exophthalmic Goitre, the medical aspect of which will be treated by Prof. McPhedran, of Toronto, the Surgical by Prof. F. J. Shepherd, of Montreal, and the Pathological by a gentleman from New York; and another on Psycho-Neuroses, of which Drs. J. J. Putnam, of Boston, August Hoch, of New York, W. Hattie, of Halifax, and Ernest Jones, of Toronto, will each present various aspects.

Medical Education will be dealt with by Prof. J. C. Connell, of Queen's University, Kingston.

All of the above will be given in the Convocation Hall during the afternoon or evening sessions before all the members.

There will be Sections in Medicine, Surgery, Obstetrics and Gynecology, Pathology, Pediatrics, and Diseases of the Eye, Ear, Nose and Throat. These will be held each forenoon. Most extensive programmes have been prepared for each, some seventy papers in all being already promised. The Sections in Medicine, Surgery, Obstetrics and Pathology will each hold three morning sessions, *commencing at* 9.15 *on Wednesday the first of June.* The attention of members is especially called to the hour of meeting so that there may be no disappointment. The Section of the Eye, Ear, Throat and Nose, and the Section on Pediatrics, will each hold one session only, viz., on Thursday next, the second of June.

W. A. Y.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION

THE forty-first annual meeting of The American Medical Editors' Association, composed, as it is, of over two hundred of the principal Medical Editors of the United States and Canada, opens at St. Louis, Mo., next Saturday, June fourth, with Headquarters at the New Planters Hotel. Dr. W. A. Young, of Toronto, who was elected President at the meeting at Atlantic City a year ago, will occupy the chair. Owing to a very considerable amount of hard work done by the Executive Committee, who have met frequently during the past six or eight months, the ensuing meeting will be one of the best ever held in the history of the Association. It is expected that there will be a large attendance of medical editors from all over the United States and Canada. The meeting should be one full of the keenest interest to those engaged in medical editorial work, as can be judged from the following Programme of Papers and Discussions:

President's Address—Dr. W. A. Young, Toronto, Ont.

"The Weekly Medical Journal."—By Dr. F. P. Foster, New York. Discussion by Dr. G. Kreidler, Cincinnati. Dr. J. L. Moffatt, Brooklyn.

"The Original Contribution and its Relative Value as Compared with Abstracts, with Special Reference to the Best Method of Making Abstracts."—By Dr. T. G. Atkinson, St. Louis. Discussion by Dr. W. B. Snow, New York. Dr. J. R. Phelan, Oklahoma City. Dr. H. M. Simmons, Baltimore.

"The Value of a Society Journal for Publishing Transactions as Compared with Issuing Proceedings in Bound Volume Form."—By Dr. S. L. Jepson, Wheeling. Discussion by Dr. N. W. Wilson, Buffalo. Dr. W. H. Neilson, Milwaukee.

"Book Reviews."—By Dr. F. C. Lewis, New York. Discussion by Dr. F. H. Martin, Chicago. Dr. C. L. Stevens, Athens. Dr. K. W. Millican, Crescent.

"Mechanical Construction."—By Dr. F. P. Davis, Enid, Okla. (By invitation.) Discussion opened by Dr. H. V. Wurdemann, Seattle.

"Editorial Construction."—By Dr. John Ferguson, Toronto Discussion opened by Dr. J. J. Cassidy, Toronto.

"What Shall We Print."—By Dr. A. S. Burdick, Chicago. Discussion opened by Dr. E. C. Register, Charlotte.

"The Advertising Agency."—By Dr. H. V. Wurdemann, Seattle. Discussion opened by Dr. W. Anderson, San Francisco.

"Editorial Individuality."—By Dr. C. F. Taylor, Philadelphia. Discussion by Dr. C. Strobach, Cincinnati. Dr. H. M. Whelply, St. Louis.

"The Extension of Advertising Patronage."—By Dr. J. MacDonald, Jr., New York. Discussion by Dr. E. A. Van Der Veer, Albany. S. DeWitt Clough, Chicago. (By invitation.)

"Blackmail and Its Relation to Journalism."—By Dr. J. J. Taylor, Philadelphia. Discussion by Dr. J. Gradwold, St. Louis. I. V. Barth, Esq., St. Louis.

"The Patent Medicine Liar and False Certifier."—By Dr. C. H. Hughes, St. Louis. Discussion by Dr. F. E. Daniel, Austin. Dr. C. Fassett, St. Joseph. Dr. T. D. Crothers, Hartford.

"The Possible Assistance of The Medical Press to The Department of Public Health."—By Surg. Gen'l H. C. Wyman, Washington. Discussion by Dr. Wm. Porter, St. Louis. Dr. Henry D. Holton, Brattleboro.

"Editorial Revision."—By Dr. Heinrich Stern, New York. Discussion opened by Dr. M. A. Goldstein, St. Louis.

"The Make-up of The Medical Journals, with Reference to Ease of Preservation of Its Contents for future Reference."—By Dr. John McRae, Calumet. (By invitation.) Discussion opened by Dr. J. Punton, Kansas City.

"The Value of Medical Advertising."—By Dr. H. E. Lewis, New York. Discussion by G. L. Harrington, N. Y. Dr. J. R. Phelan.

"The Volume Index of Medical Journals."—By A. T. Huntington, New York. Discussion opened by Dr. Jas. P. Warbasse, New Work.

We would strongly urge upon all of our confreres who take an interest in Medical Journalism to be present at St. Louis, remaining over for the meeting of The American Medical Association which opens in the same city on Tuesday, June seventh.

Canadian Journal of Medicine and Surgery

Editor:
J. J. Cassidy, M.D.
45 Bloor St. E., Toronto

Managing Editor:
W. A. Young, M.D., L.R.C.P., Lond.
145 College St., Toronto

Surgery:
F. N. G. Starr, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant, Toronto General Hospital; Surgeon, Hospital for Sick Children, Toronto; N. A. Powell, M.D., C.M., Professor of Medical Jurisprudence, Toronto University; Senior Assistant in charge, Emergency Department, Toronto General Hospital.

Clinical Surgery:
Alex. Primrose, M.B., C.M., Edinburgh University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University; Surgeon Toronto General Hospital; and Herbert A. Bruce, M.D., F.R.C.S., Eng., Surgeon, Toronto General Hospital.

Orthopedic Surgery:
B. E. McKenzie, B.A., M.D., Toronto; Surgeon to the Toronto Orthopedic Hospital; ex-President of the American Orthopedic Association; and H. P. H. Galloway, M.D., Winnipeg, Man., Member of the American Orthopedic Association.

Physiology:
A. B. Eadie, M.D., Toronto.

Medical Jurisprudence and Toxicology:
Arthur Jukes Johnson, M.B., M.R.C.S., Eng., Coroner for the City of Toronto; Surgeon Toronto Railway Co., Toronto; W. A. Young, M.D., L.R.C.P., Lond., President of the American Medical Editors' Association; Associate Coroner, City of Toronto.

Physiotherapy:
Chas. R. Dickson, M.D., C.M., Queen's University; M.D., University of the City of New York; Electrologist Toronto General Hospital, Hospital for Sick Children and St. Michael's Hospital.

Pharmacology and Therapeutics:
A. J. Harrington, M.D., M.R.C.S., Eng., Toronto.

Pediatrics:
Allen Baines, M.D., Toronto; Associate Professor Pediatrics, University of Toronto; Physician, Hospital for Sick Children; A. R. Gordon, M.D., Toronto; Senior Medical Assistant, Toronto General Hospital; Helen MacMurchy, M.D., Toronto, Editor, The Canadian Nurse.

Dermatology:
D. King Smith, M.B., Tor., Toronto; Demonstrator in Pathology, Toronto General Hospital.

Medicine:
J. J. Cassidy, M.D., Toronto, ex-Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; W. J. Wilson, M.D., Toronto, Physician, Toronto Western Hospital; and Dr. J. H. Elliott, ex-Medical Superintendent, Gravenhurst Sanatorium, Ont.; Associate Medicine and Clinical Medicine, University of Toronto; Senior Medical Assistant, St. Michael's Hospital.

Clinical Medicine:
Alexander McPhedran, M.D., Professor of Medicine and Clinical Medicine, Toronto University; Physician, Toronto General Hospital; Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore, Md. H. B. Anderson, M.D., Toronto; Associate Professor of Clinical Medicine, University of Toronto; Physician, St. Michael's Hospital.

Bacteriology:
J. G. Fitzgerald, M.D., Lecturer in Bacteriology, University of Toronto.

Mental and Nervous Diseases:
N. H. Beemer, M.D., Mimico Insane Asylum. Campbell Meyers, M.D., M.R.C.S., L.R.C.P. (London, Eng.), Private Hospital, Deer Park, Toronto.

Gynecology and Obstetrics:
Geo. T. McKeough, M.D., M.R.C.S., Eng., Chatham, Ont.; and C. F. Moore, M.D., Toronto.

Pathology:
W. H. Pepler, M.D., C.M., Surgeon Canadian Pacific R.R., Toronto; Junior Medical Assistant, St. Michael's Hospital; and J. J. Mackenzie, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology:
J. M. MacCallum, M.D., Toronto, Senior Assistant Eye Department, Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear:
Perry G. Goldsmith, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb; Senior Assistant Ear, Nose and Throat Department, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter regarding Advertising, and make all Cheques, Drafts and Post-Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

Reprints supplied Authors at Cost.

Editorials

HEMORRHAGIC DISEASES OF THE NEW-BORN

UNDER the heading of "Hemorrhagic Diseases of the Newborn," Dr. Osler ("Practice of Medicine," p. 747) describes three hemorrhagic diseases: (1) Syphilis Hemorrhagica Neonatorum; (2) Epidemic Hemaglobinuria; (3) Morbus Maculosus Neonatorum. In the first of these affections the child may be born healthy, or there may be signs of hemorrhage at birth, followed by extravasations into the skin and bleeding from the navel or from mucous surfaces. Jaundice may be noted. The post-mortem shows extravasations into the viscera, with syphilitic changes in the liver and other organs. The second of these diseases, epidemic hemaglobinuria (Winckel's Disease) occurs occasionally in an epidemic form in lying-in hospitals. It is a fatal disease, appearing about the fourth day after birth, and its principal symptoms are: jaundice, gastro-intestinal disorder, fever, rapid breathing, and sometimes cyanosis Albuminuria and methemoglobinuria are noted. The post-mortem reveals a swollen spleen and multiple punctiform hemorrhages.

In the third disease mentioned here, viz.: Morbus Maculosus Neonatorum, bleeding usually supervenes during the first week. The disease is usually of short duration; in fatal cases death occurs in from one to seven days. The temperature is often elevated. Dr

Townsend, Boston, who has written more largely of and reported more cases of it than any living man, thinks it is of infectious origin: on account of its general nature, self-limited character, the presence of fever, and its greater prevalence in hospitals. The bleeding may be associated with hematogenous jaundice. His mortality is 79 per cent.

Dr. Machell, Toronto, reported fourteen cases of "Acute or Spontaneous Hemorrhages in the Newly-born" in a paper published in THE CANADIAN JOURNAL OF MEDICINE AND SURGERY, April, 1907. In the first and second cases the temperature is not recorded. In the third case there was an elevation of temperature, 100-101° F., with nose-bleed and purpura on the arms and legs; general jaundice. In the fourth case there was hemorrhage from the bowel, with vomiting of bright blood, slight jaundice, temperature not over 101°F. In the fifth case, hemorrhage from the navel, melæna and petechiæ were noted—temperature never less than 103° F. In the sixth case, petechiæ on arms, hands, roof of mouth and a large cephalhematoma were observed; bleeding from one nostril, from the stomach, from around the cord and into the cellular tissue about the left orbit also occurred; temperature 101-102° F. In the seventh case hemorrhage began when the infant was one day old. Purpura melæna, vomiting of blood, were observed; temperature not given. In the eighth case, melæna, vomiting of blood, and ecchymosis were noted; temperature normal, respirations 24. In the ninth case vomiting of blood and melæna were noted

In the tenth case hemorrhages began from the mouth and intestines on the first day; general jaundice was also observed. In the eleventh case vomiting of blood was noted; temperature 101 4-5° F. In the twelfth case there were extravasations in the suprarenal capsules, hematoma of the liver and a subdural hemorrhage. In the thirteenth case vomiting of blood was noted. In the fourteenth case there was melæna. The mortality was 64.71 per cent.

Dr. Machell discards syphilis and hemophilia as etiological factors in his cases. Several of them appear to belong to the category described as Morbus Maculosus Neonatorum, in which hemorrhages from different parts of the body beginning during the first week of life, an elevated temperature, and the occasional association of hematogenous jaundice are the chief symptoms observed. The therapy employed, viz., gelatine internally and externally as a hemostatic; ergot, chloride of calcium and adrenalin, for a similar reason, and the saline solution per rectum, do not seem to have been responsible for such curative results as were obtained.

In the *New York Medical Journal,* April 23, 1910, an editorial notice appears of a new treatment for what is entitled "Hemophilia Neonatorum," by Dr. John E. Welch, pathologist of the New York Lying-in Hospital. Twelve cases were treated and all but one of them recovered. The treatment used by Dr. Welch was the subcutaneous injection of normal human serum. As evidence of the fact that the disease he treated is not a hemophilia, Dr. Welch points

out that traumatism is not a necessary or even a usual occasion of the hemorrhages noted. When the bleeding proceeds from the stump of the navel it usually starts from points in the stump between its base and the ligature. Hemorrhages also occur from the vagina, urethra, mouth, nasal passages, intestine and even the skin. Dr. Welch also exhibited an apparatus for procuring and preparing the human serum. It will be a matter of great satisfaction if Dr. Welch's treatment should prove successful in the hands of others, and one more exceedingly fatal disease should prove amenable to a remedy devised by medical science. J. J. C.

THE ORPHANAGES OF ONTARIO

Dr. R. W. Bruce Smith, Inspector of the Hospitals and Charities of Ontario, in the fortieth report of his department, just to hand, notes that the number of children in the orphanages of Ontario is much less than for several years. This decrease of children in orphanages meets with his approval, and the only criticism he makes is that the orphanages are not depleted fast enough. As an evidence of the demand for children to be adopted, we learn that the Children's Aid Societies throughout Ontario have more applications for children to be adopted than can be supplied. The majority of people taking English children express a preference for native Canadians, but have to be content with children brought out

from the orphanages of Great Britain, and the principal reason for this restriction is that many native-born Canadian orphans have been committed to the orphanages with the expressed understanding that they must be kept there and not given out for adoption into private homes. This arrangement is not approved of by Dr. Smith, who says: "No matter how kindly cared for they may be in these institutions, there is lacking some of the elements that make for rugged upbuilding of character."

It must be admitted, on the other hand, that the desire of a widow to have the society of her own daughter, or the assistance of her own son, after some years of institutional life, is a very commendable one. Besides, looked at even from the standpoint of those who invest in other people's children, the character of a child is not simply the outcome of environment, and some Canadian orphan children, sprung from weakly or dissipated parents, may not turn out well, or may even do discredit to the best of foster parents. The adoption of children whose ancestry on both sides is not known must be regarded as a venture.

The fact that in Ontario such ventures in foster parenthood are cheerfully, even ardently, made, shows that love for children lies deep in the human breast, and that a home, even a luxurious one, is considered incomplete without children. If we are justified in believing that the low birthrate of Ontario, viz.: 25.6 per 1,000 of population (1908), is due to the voluntary limitation of families, it is just as fair

to think that, in many instances, the evident readiness to adopt orphan children in Ontario is an attempt to give a halo to voluntary barrenness.

Whatever the motives of foster parents may be, the future of an adopted orphan in a respectable home ought to be dowered with advantages not obtainable in the best of orphanages. There will be individuality and a sense of independence, unfelt in the society of an orphanage, a feeling of having a father and a mother instead of being nobody's child or the child of a poverty-stricken, perhaps an unloving parent, seen at long intervals; a freedom to form associations with some children and to discontinue relations with others. Then there will be incidentally less exposure to the contagious diseases of childhood. There will be a more refined society in a good many cases; or a chance of introduction, in some instances, to good business, or perhaps professional life,—in fact, a future such as opens before the best-born child in the land.

All adopted orphans, however, do not drop into such delightful niches. A childless tradesman's wife may adopt an orphan girl, to be a companion to herself and to do the chores about the house; an orphan boy may be made to work slavishly on a farm, with no advantages in store, though it is freely acknowledged that these orphan children are looked after by Provincial inspectors, who solicit correspondence from them and attend to their complaints.

Institutional life has well-marked advantages—order, method, control, supervision and, especially,

training in some form of wage-earning industry. Girls are taught to sew, mend clothing, to do house-cleaning, cooking and other domestic work; boys are trained as bakers, tailors, shoemakers. Family life is the acme, but a perfected institutional life, particularly for the wayward or weakly children, is a close second. Besides, as Dr. Smith says, "The domestic management of the orphanages of Ontario is carefully and prudently looked after. Hence, it is reasonable to suppose, that the managers of these orphanages must be persons of superior merit, equal in talent and ability to the best of foster parents, willing and able to radiate a very beneficent influence on the mental and moral natures of their orphan charges." J. J. C.

THE HOSPITALS OF ONTARIO

From the report of Dr. R. W. Bruce Smith, Inspector of Hospitals and Charities of the Province of Ontario, for the year ending 30th September, 1909, we learn that the records of the year indicate the continued success and progress of the hospitals of this Province. The total number of patients in the seventy-one public hospitals was 48,788. The number of deaths during the year was 2,963, which gives a percentage of deaths to patients under treatment of 6.07. The total expenditure for the support and maintenance of the hospitals (including capital account, $314,947.51), amounted to $1,594,751. The

average cost per day of each patient was $1.23, a rate which compares favorably with the maintenance rates of the hospitals of the United States.

Adequate fire protection is now provided at nearly every hospital, there being not only proper facilities for escape in case of fire; but also fire-extinguishing appliances, always ready for use, in the event of a fire occurring.

Hospitals having been established in the different counties, people living in every part of Ontario will be afforded advantages in the treatment of disease which not long ago were only to be found in the larger cities. So true is this, that, to-day, the medical and surgical equipment of many hospitals, in the smaller towns, is superior to what is found in some of the older hospitals in the large cities.

Some of the Toronto hospitals, (names not given) are criticized on account of lack of accommodation, which has resulted in a disposition to crowd poor patients, admitted on municipal orders, into poorly ventilated wards, while private and semi-private patients get rooms in the best parts of the building.

Looking at a public hospital, in its true light, as a refuge for the sick poor, Dr. Smith insists, that Toronto hospitals should be compelled to give as comfortable wards for the use of the poor patients as are found in the hospitals of the small towns of Ontario. He states that hospitals neglecting to provide such accommodation are unworthy to share in the Provincial and municipal grants to public hospitals.

J. J. C.



EDWARD VII. THE PEACEMAKER

"I HAVE DONE MY DUTY"

Born, November 9th, 1841 **Died, May 6th, 1910**

Ascended The Throne January 22nd, 1901

To the end indeed, he did his duty. As a man, as a King, as an Englishman, he will go down in history as Edward the Greatest, the most tactful and the best beloved of Sovereigns.

His death is not the sorrow of a nation, but the grief of nations, for he was the universal friend and the lover of "Peace and good will to men."

As a Sovereign, towards his people he was sympathetic, tireless, and ever ready with a personal word of cheer in every work which might aid in the advancement of Medical Research or give relief to suffering humanity.

He came to the throne of England, as the shadow of war hung over it, he leaves it with a Benediction of Peace. He came to govern a people who welcomed him as his good Mother's Son, he left it as a Monarch worthy of the Crown of Empire, a name he had made for ever great.

Requiescat—Edward Rex Imperator

W. A. Y.

MAY SIXTH, NINETEEN TEN

"In Memory of His Late Majesty"

On Sunday afternoon, May 15th, the University of Toronto held a service in Convocation Hall "In Memory of His Late Majesty King Edward VII."

Convocation Hall was suitably draped in Royal Purple. The attendance of both students and public was large and the service was entered into by all present with an unusual spirit of solemnity.

On the platform were Chancellor Meredith, President Falconer, Sir James Whitney, Sir Mortimer Clarke, the Provost of Trinity College, Dean Clarke, Dean Temple, Controller Spence, Controller Church, Members of the Faculties of Medicine, Arts, Theology and other prominent citizens. An orchestra of twenty pieces was present to conduct the sacred programme of music.

The order of the service was as follows:

ORCHESTRA	Funeral March	*Chopin*
HYMN	"O God, Our Help in Ages Past"	
PRAYER	The Reverend the Provost of Trinity College.	
READING OF SCRIPTURE	The Reverend the Dean of Theology, Victoria College.	
HYMN	"Nearer My God to Thee"	
ADDRESS	The President of the University.	
BENEDICTION	The Provost of Trinity College.	
ORCHESTRA	Eroica	*Beethoven*

GOD SAVE THE KING

W. A. Y.

WHY ARE THE AUTOS OF PHYSICIANS "HELD UP" DAILY BY THE POLICE?

THAT the men who have given their best years to the study of the saving of life, and their hours unstintingly to the service of suffering humanity, should, when suspected of breaking the Speed By-law, be treated as ruffians going on a joy ride is a disgrace to the police system of a city the size of Toronto.

The physicians of this fair city *are gentlemen,* and, by courtesy, servants of the public, but *not serfs under Russian rule.* If, on going to a case where perhaps death seems imminent, a doctor exceeds the ten-mile limit or takes a shorter turn of a corner by a quarter of an inch, he is summoned to the Police Court, and there, when giving a true and proper explanation of the circumstances, he is interrupted by a police inspector who seems to have more than his share of assurance, and adds, uninvited, his opinion, and gives it in spite of the magistrate presiding over the court. Whether this inspector is to be taken seriously or just as a preacher values the family parrot when it swears him out of the house, after just adding a saintly "Amen" to his prayer, is a subject worthy of discussion. It has been stated by several medical men who during the past few months have been summoned for supposed infraction of the Motor By-law, that a certain police official of Irish extraction has seemingly taken it upon himself to *not only prosecute* (one doctor said "persecute"),

but *also try* the case, to the utter extinction of Magistrate Kingsford or other luminary who happens to be on the bench and who is paid to dispense justice. Is this the reason that a physician the other day described the afternoon Police Court as being nothing short of a "Bear Garden"? Is Magistrate Kingsford going to allow this man to run his court for him, or may physicians expect to have justice meted out to them by him? Is it true that police constables are assembled monthly to have read to them the list of convictions that each has secured and the number of times that each constable has appeared in the Police Court to give evidence, and that those securing the smaller number of convictions are told they must do better in the future, so that, inferentially, it is not unreasonable to suppose that those who are most successful in securing convictions will be most likely to be rewarded by promotion? Can the Chief of Police deny that any of his Inspectors have taken this position? We can hardly credit this. Again, why are summonses withheld more than twenty-four hours, after which it is impossible for the defendant to recollect exactly the circumstances of the case? The statute as to speed has not been in any way amended since first it became law—why, may we ask, this sudden determination to enforce the law against physicians?

Will the police authorities be good enough to tell us whether there is one case on record where a physician in Toronto, through careless driving of his motor car, has done any bodily harm to any other individual

on the street? We understand, on good authority, *that the only case of injury occurring in Toronto this year from furious driving on the part of a motor cyclist was when a police constable ran down a boy on a bicycle, thereby hurting him.* Why are not the same laws applied to the police as are enforced against citizens? Might it not be wise to amend the by-law governing street traffic, making it incumbent on all carriages, whether horse driven or driven by gasoline, to light their lamps from sundown to sunrise?

It would seem as if the method adopted to catch motorists in the act of breaking the speed limit is for the constable to stand at or near the foot of Avenue Road or other hill and by means of a stop watch "clock" the auto as he thinks it leaves the summit of the slope and until it reaches a certain spot near the foot. No allowance seems to be made for passing street cars or other vehicles, which might perhaps occlude the constable's view and render his testimony valueless. Why, if necessary, cannot the police authorities adopt the method in vogue in England, where two constables are placed on the road and the motorist is clocked by one man as he passes a certain spot and by another on reaching another spot further on, and, as soon as the driver is halted, the two constables get together and compare figures, in that way convincing the supposed offender of his infraction or non-infraction of the law?

Is it true that the "expert" who is usually employed by the police to test the running qualities of

the car, whose owner has been summoned for breaking the speed by-law, is paid $5.00 for his hour's labor in so testing and a similar amount for giving his evidence in court on the same case? That looks like getting a conviction no matter what is the cost. Pretty good fee for a machinist, considerably exceeding what a physician is paid for spending, perhaps hours, in order to give evidence in the Assize Court.

It seems to us that the Board of Control in this city should be willing to grant some special privileges to physicians who use motor cars by passing in Council an ordinance similar to that at present in existence in Rochester, N.Y., and which for some years has been found to be eminently satisfactory. The following is an exact copy of the by-law:

CITY OF ROCHESTER, N.Y.

Mayor's Office, ..., 1910.

....., M.D., the bearer of "Physicians' Street Permit" badge No., is hereby granted the privileges of an "ordinance relating to nuisances," amended June 17, 1896, to read as follows:

"Sec. 7. No person shall drive or ride or cause to be ridden or driven any horse or other animal upon any public street or place within the city of Rochester at a speed exceeding six miles per hour, under a penalty and fine of not less than five dollars nor more than fifty dollars for each offence."

This section shall not apply to public and private ambulances while on duty responding to actual calls for assistance; nor shall it apply to horses or vehicles of any physician when actually engaged in professional work in responding to emergency calls, provided the said physician shall have in his possession a permit issued by the Mayor of said city.

.....Mayor.

Similar by-laws have been in force for several years in Philadelphia, Chicago and other large cities in the United States, and only a few weeks ago the city of Baltimore fell into line, granting physicians using motor cars special privileges along the highways. *Such an ordinance should immediately be introduced in Toronto.* Medical practitioners are not men who would abuse this privilege in any way, and the adopting of such an arrangement would save endless trouble. W. A. Y.

A LITTLE EMBARRASSING, DON'T YOU KNOW?

It is with deep regret and some surprise that we chronicle the fact that the President of the Ontario Medical Council has not accepted the offer we made him in our May number. Dr. Hardy is so well known for his desire to husband the finances of the institution over which he presides and to advance the welfare of the profession, that we had expected him to accept our offer with alacrity. His alacrity is, however, not what you might notice.

On reference to page 247 of the last Announcement, we find that Dr. Hardy spoke as follows: *"I would like to call your attention to the fact that the expenses of this College are constantly increasing. 'In* 1907 *our balance in the bank was* $65,161.00; *in* 1908 *the balance in the bank was* $48,359.00, *and in* 1909, $44,745.19.' *To my mind this decrease in the funds on deposit is a most serious condition of*

affairs, as at the present rate in ten years we shall practically be in debt.'' We repeat our offer already made, to publish in detail and at our own expense, the expenses of the Ontario Medical Council as alluded to in our last issue, if Dr. Hardy will furnish them.

Dr. Hardy in his letter has stated that the information might be obtained from our representative, Dr. J. S. Hart. We have applied to Dr. Hart—(who moved in Council, *vide* Announcement 1909, page 380, that the expenses be published in detail)—for the information which the profession insist upon being furnished with. Dr. Hart, in conversation with us, hesitates to furnish this information saying that to furnish it would place him in a very embarrassing position. Dr. Hart is certainly in the difficult position of explaining to his constituents *why* this is embarrassing to him. We leave him on the horns of his dilemma in the hope that before the elections in October next he may have succeeded in extricating himself.

In spite of the determined and fatuous refusal of the Council to furnish this information, we shall yet get it, *even if the rights of the members of the College of Physicians and Surgeons have to be determined by the courts.*

We commend to the careful perusal of our readers page 389 of this issue, on which will be found a letter from Dr. J. M. MacCallum, a member of the Council, who has forwarded us the official stenographer's report of a portion of the debate at the

special meeting in December last. What little game is the smooth, mild-mannered representative of the University of Toronto up to now? Is he trailing a red herring across the track, and does he wish us to believe that the Medical Council will *really* correct the abuses we complained of? These extracts show beyond a doubt that the Council has no intention to correct these abuses, but that *they have all along been well aware that the abuses which we have charged did and do still exist.* They show that Dr. Temple, Dr. McColl and Dr. MacCallum—for this we give them due credit—were all very ready to bring these matters to the attention of the Council, and the Council opined that *it was really too dreadful for words* and speedily transferred the surplus just the same as per usual. Why did not these members have the moral courage to go a little further and move to have the matter investigated? *Who got the money* and how did they get it? Some of the ways in which they got it we have shown in our May issue. Perchance, in our July number we will try to show other methods by which these facile digesters assimilated the surplus. The Council may rest assured that we will yet publish "who got it"—so that the electorate may purge it of the men who, for the sake of petty graft have dragged in the mire the name of the College of Physicians and Surgeons of Ontario. W. A. Y.

FOUR THOUSAND A YEAR FOR A MEDICAL HEALTH OFFICER: TEN THOUSAND A YEAR FOR A CITY COUNSEL

THE remarks have been many and very much to the point in respect to the position of Medical Health Officer for Toronto.

The position with its munificent (?) income has been gracefully declined with thanks by a capable man, Dr. Charles Hodgetts, one who is well fitted to fill that office. Another splendid man has been spoken of, but it cannot be said that Dr. Amyot seeks the office and his acceptance (at the date of writing) looks doubtful.

While few men indeed are so small in character that either political bias or salary tempts them rather than a desire for work they are equipped to do, still it is not worthy of the City of Toronto to offer so small a salary to the one who is held responsible for the lives of its citizens and hand out a cool ten thousand dollars per annum to its City Counsel. The physician who will accept the position of Medical Health Officer for this large and growing city, if competent for such an office, must of necessity be advanced enough in his private practice to be making more than four thousand dollars a year, unless he has retired from active practice and is able to live on his investments or his wits. The age of anesthesia arrives too soon for a man of ability to provide properly for the future of his family on four or five

thousand dollars a year and work night, noon and morning answering every summons of the City Council or every cry of mad dog or measles in this big city, with the alacrity of a bell hop.

The position of Medical Health Officer carries with it no "flowery bed of ease," little glory and less cash; few will seek it, but we trust that someone, a martyr, a scientist, and a gentleman, will have its greatness thrust upon him, and let us fervently ask for another Saint's Day to be added to the list.

W. A. Y.

DR. CHARLES HODGETTS JOINS THE FEDERAL SERVICE

At the date of writing we understand that official announcement by the Chairman of the Conservation Commission will shortly be forthcoming of the appointment of Dr. Charles Hodgetts, Secretary of the Ontario Provincial Board of Health, to take charge of the Health Branch of the Commission work. The Commission contemplate a far-reaching campaign of education and of practical endeavor in respect to the Prevention of the Spread of Tuberculosis, the Pollution of Streams by Sewage, Municipal Sanitaria, etc. This work will be undertaken by both Federal and Provincial Governments.

We heartily congratulate Dr. Hodgetts upon his important promotion and wish him God-speed in his new sphere of duty. W. A. Y.

Editorial Notes

Baking Destroys Pathogenic Bacilli

Dr. Auché, of Bordeaux, has incorporated tubercuious sputa in the dough of loaves of bread of different sizes, and found that, in every instance, the bacilli had lost their virulence after baking He has also made observations on other microbes, which he placed in bread, introducing into the dough active cultures in bouillon of B. typhosus, B. paratyphosus, B. dysentericus, B. coli, streptococcus pyogenes, staphylococcus aureus, and a variety of proteus. The results of his observations have been communicated to the Biological Society of Bordeaux and appear in *La Semaine Médicale,* 1910, No. 9, xxxv. In all these cases the results obtained were negative—that is to say, culture media, sown with fragments of the bread taken from the parts inoculated remained sterile, whereas, when sown with pure cultures unaffected by heat, the tubes grew abundantly. So far, therefore, as the above mentioned organisms are concerned, Dr. Auché thinks, that they are destroyed in baking, and that, apart from any accidental contamination of the surface, after taking it from the oven, bread may be considered a thoroughly aseptic article of diet.

The Automobile as a Sanitary Agent

The use of automobiles is now so general and extensive that it has become commonplace, and no longer attracts attention. That it is an added source of danger in crowded streets is apparent; but the swiftness it gives to vehicular locomotion bids fair to override the protests of dodging pedestrians. As a supplanter of the horse, it is doing for the streets of cities a very important service in preventing the accumulation of horse manure. The feces of the horse are dangerous to health, more

dangerous than the feces of any other quadruped kept in civilized communities.

Flies breed in horse manure; tetanus swarms in it. Why should not drays, express wagons, milk wagons and all four-wheeled vehicles be changed into automobiles? An automobile does not run away and endanger life and property during its wild career. It can be left at the sidewalk, while the driver goes indoors. It is enormously powerful. These are some of the reasons which make for its general employment as a traction agent; but the most far-reaching reason in favor of its general utilization is the improvement in the bacteriology of street dust, which will follow the disappearance of the horse from our streets.

The "Third Degree"

One reads with astonishment of the horrors of the so-called "Third Degree," as applied by the police to friendless, timid prisoners.

At the Special Sessions in New York City, last April, a prisoner, who was indicted for first degree murder, made a confession, which he afterwards repudiated. He said that the confession had been wrung from him by cruelty; that he had been starved, prevented from slaking his thirst, and compelled to remain awake, until, driven to the verge of collapse, he said many things which were not true.

Justice Crane, who tried the case, very properly remarked that the police should apply the golden rule in handling a prisoner, treating him as they would want to be treated.

Justice Crane's remarks recall the Christian ideal, which should permeate the official behavior of the police, as well as the bench and the bar. And yet in the Great Republic, where all men are equal, the police bow down to mammon. A well-to-do prisoner, like Thaw, is treated by the police with every courtesy; eminent counsel almost fall over each other in their anxiety to assist in the presentation of his case, while a friendless, suspected

prisoner like Boehm is treated to the third degree. Should not the prison physician have advisory powers in such cases? If exercised in a judicious manner, the efforts of the police to unearth crime, and bring suspected criminals to the bar of justice are most praiseworthy. Suspected prisoners, however, should not be treated as criminals until guilt is proved, and only then should they get the punishment meted out to them. A prisoner should not be forced to answer questions, until he can do so intelligently, and until he is protected by counsel.

If not protected by counsel, there is all the more reason why a friendless prisoner should not be exposed to the extractive efforts of the police. If there is no other protection to invoke, he should be permitted to look for the protection of the prison physician.

Rest After Meals

All animals and many savages go to sleep, when they have eaten. Would that civilized man would imitate them! Unfortunately he does the very reverse; in most cases, no sooner is the meal down than he tries to resume his ordinary occupations and, perhaps, this is one of the reasons why dyspepsia is so common nowadays. Worse still, a man is expected to speak at a lunch or dinner, in such a way as to attract the attention and merit the applause of his hearers. Looked at from a physiological standpoint, such an intellectual effort is a hindrance to the speaker's digestion, since it withdraws from that function the energy which is devoted to his address. Under such circumstances, common sense would suggest, that a speaker at a lunch or dinner would just trifle with his viands, instead of doing credit to the chef. His dyspeptic listeners, of course, need not restrain their appetites, and, if they do not eat too fast, may not be harmed by such a repast; because repose, assisted by a good cigar, produces the somnolent condition, which shortens the period of digestion.

And if the proceedings are not too short, and the period of

repose last for, say, a couple of hours, some bad cases of dyspepsia from insufficiency may derive a good deal of benefit: from faring well and listening to other men speaking ill or well, at luncheс and dinners.

A Death from Hydrophobia

The long incubation period of rabies cannot be understood, if the virus travels through the blood vessels of the bitten part; but becomes more intelligible, if we admit that it reaches the nerve centres through the sheaths of the injured nerves. The known fatality of bites by mad dogs about the face and head, and the brevity of the incubation period in such cases are also explainable upon this ground, the injured nerves being so close to the brain axis. G. E. Seaman, a soldier of the Norfolk Regiment, stationed at Gibraltar, was bitten by a mad dog. He and another man, who was bitten at the same time, were sent to the Pasteur Institute, Paris, in September, 1909. Seaman's comrade died within a month, but he returned to England, and no symptoms of hydrophobia occurred until a week before his death, when he complained of pain in the elbow of the arm which was bitten. The pain spread to the shoulder and then to the back of the neck. He was admitted to the Hackney Infirmary, March 29th, 1910, and a diagnosis of hydrophobia was made. During his terrible sufferings Seaman was quite sensible, and was able to give a collected and rational account of his illness and of the treatment he had received at Paris. Towards the end, he complained of great difficulty of breathing, and he prayed the doctor to cut his throat, so that air could be got into his respiratory organs. A post-mortem was made, but nothing was found except a little inflammation of the brain and kidneys.

In the report of this case, which appears in *The British Medical Journal,* April 2, 1910, p. 851, nothing is said about the condition of the spinal cord.

That the chief symptoms of hydrophobia are due to morbid changes in the cranial nerves, and that death in this disease is

the result of paralysis of the respiratory and vaso-motor centres may be accepted, when the predilection which the virus of rabies seems to have for the brain-axis is remembered. In Seaman's case, the incubation period lasted for six months, during which time the rabic virus was engaged in travelling upwards from the injured nerves in his arm, until it reached the brain-axis, the Pasteur treatment not having been successful in establishing immunity to hydrophobia.

The most important part of the treatment of such a case would be the surgical treatment of the bitten part. The patient should be placed under the influence of a major anesthetic and a careful excision made of any tissues, which have received the imprint of the rabid animal's teeth. Free bleeding of the bitten parts should be encouraged, in order to provide an outlet for any rabic saliva which may have found lodgment in the bitten part, and the use of the cupping glass over the incised parts would be helpful to promote the cleansing of the wounds. "It is best," says Osler, "to keep the wounds constantly open for at least five or six weeks." The open wounds should be douched, guttatim, to assist in the elimination of any hidden virus. A preventive treatment of this scope would be more likely to be followed by immunity to hydrophobia than cauterization of the bites with the actual or thermo-cautery. Antiseptic solutions are generally recognized as of secondary value. The treatment recommended should be applied, within twenty-four hours of the bite, and should be thorough, all abrasions about the fingernails or the slightest fissure in a lip being sufficient to admit the virus. Pasteur's treatment by vaccination has reduced the mortality to about five per cent—a result that is pretty constant all over the world. This figure, however, cannot be taken as absolute, for, undoubtedly, patients are treated, who might not have taken hydrophobia, or who were not bitten by an animal proved to be rabid.

J. J. C.

PERSONALS

We extend our congratulations to Dr. and Mrs. D. C. Meyers on the recent addition to their family.

Dr. R. D. Rudolf had recently conferred upon him in absentia, the Fellowship of The Royal College of Physicians, London.

Dr. D. King Smith, of Wellesley Street, has received the honor of being elected a member of the American Dermatological Society.

Dr. and Mrs. F. N. G. Starr leave for England next month. Dr. Starr intends attending the meeting of The British Medical Association in London.

Drs. J. J. Cassidy and John Ferguson intend attending the meeting of The American Medical Editors' Association at St. Louis, which opens on the fourth instant.

Among those who attended the recent medical meeting in Washington, D.C., were Drs. F. N. G. Starr, A. McPhedran, R. D. Rudolf, Alex. Primrose and Perry Goldsmith.

The names of Drs. Amyot and John Noble, of Toronto, and George Acheson, of Galt, have been mentioned in connection with the appointment of Toronto's new Medical Health Officer, though up till the time of going to press the appointment had not been decided upon.

Errata.—We regret that, owing to an oversight, the name of Dr. Ernest Jones, of Toronto, was omitted as one of the authors of the paper, "A Test for the Diagnosis of General Paralysis in the Insane," and which was published in our "May" number under the sole authorship of Dr. George W. Ross, of Toronto.

The name of Dr. Helen MacMurchy was recently submitted to the Board of Education for appointment as Medical Inspector to the Public Schools of Toronto. We think that the choice of Dr. MacMurchy is in every respect a wise one. Dr. MacMurchy having, not only the ability to fill such a position, but a special fitness for work of this kind.

Correspondence

The Editor cannot hold himself responsible for any views expressed in this Department.

Managing Editor

THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR DOCTOR,—Will you permit me to quote from a verbatim copy by the official stenographer of the discussion that took place in the Medical Council at its special meeting in December, 1909, on the subject of the Council's finances? This will be printed in the next Announcement. I had drawn attention to some discrepancies—as they seemed to me—in the accounts of the Examiners and asked for an explanation from the Chairman of the Finance Committee.

Dr. Hart said as follows: "Our Financial Department is badly organized. We have a Treasurer who does his work honestly and we have the Chairman of our Finance Committee, against whom I would not cast any suspicion; but no one of these men is in a position to scrutinize the accounts. What can we do?"

Dr. Temple (Chairman of the Finance Committee): "Dr. Hart has properly asked the question, What can we do? We must do the thing ourselves. In the present system there must be some alteration. I do not mean to say one single member of the Council has ever done anything that is wrong; but certainly, as the accounts stand at present, they are in a very unsatisfactory state. Our expenses are simply enormous. Something ought to be done, and I think the Council should appoint some person who would take cognizance of these affairs without throwing anything personally upon any member of the Committee that has to do it. I would not question any man's statement. If he says that it is correct, I would pay it and that is the end of it."

Dr. MacCallum: "I can understand Dr. Temple's position, but I think this Council ought to do something. It was for the purpose of drawing attention here to it that I spoke."

Dr. Temple: "It is a matter simply of duty; I can't help myself. It is in black and white that a gentleman presenting his account to the Treasurer, that he has to pay it."

Dr. McColl: "As belonging to the Finance Committee, I think that where the whole trouble is is in allowing everybody to send in their own bills, even from this Council, and from others outside, and I think if this Council would give the power to the Finance Committee to simply tax what each man's railway expenses should be and the amount of time that is necessary for him to come here, and go and write out his cheque without him having to certify to it, it would get over the difficulty. We know where every man has come from; we can easily find out in ten minutes the amount of time he loses before or after, without travelling in the middle of the night, and tax the bill accordingly; and if the Committee meet early in the session they can easily have that part arranged, and then the only part left after that would be to ascertain the number of days the Council actually sat, and for the Examiners the same thing. I am willing, as far as I am concerned, that any two or three members of this Council should decide for me what time I lose in coming and going, and that can all be done in the early part of the session, and all that has to be added after that is the daily allowance. I do not see why the same thing cannot be done in connection with the Examiners, and all this trouble will be gotten over and it will be done in the proper manner."

After some further remarks by Drs. Vardon, Gibson, Cormack and Henry, the President, Dr. Hardy, said: "Unless the Finance Committee brings in a report on this question nothing can be done, and there is no use taking up time in discussing it. At the next session, probably, something will be done definitely to define it."

Dr. MacCallum: "Is it in order that this matter be referred to the Finance Committee?"

The President: "I do not think so, I think you will be out of order."

Dr. MacCallum: "That means it will have to be put over till the July meeting."

The President: "I think so."

I shall content myself with stating that I have been a member of the Council since July 1st, 1909. For the regular meeting of July, 1909, I received $120.00, as fixed by the Finance Committee (vide page 332 of the last Announcement); for the Special Meet-

ing held in December, 1909, lasting three and one-half days I received $70.00.

However great the Council's shortcomings in your eyes, a perusal of these extracts may perhaps persuade even you, Mr. Editor, that it, at least occasionally, seeks to do the proper thing. I might say more on this subject. My "log-rolling propensities," so evident to your gentle correspondent, "Irate Practitioner," tempt me once more to shoulder my peavy; but I refrain.

JAMES MACCALLUM.

Toronto, May 16th, 1910,
112 College Street.

Managing Editor

CANADIAN JOURNAL OF MEDICINE AND SURGERY,

145 College Street:

DEAR SIR,—It seems from your editorial regarding Council expenditures that there is some difficulty about arriving at the facts, and it has occurred to me that if each member of the Council would supply you with information regarding his own receipts the difficulty would be very easily overcome.

As the representative on the Council of Victoria University I took my seat at the Kingston meeting in 1907, and I drew for that Session $60.00, plus $16.30 for mileage. For a Special Session on October 4th, 1907, in Toronto, I drew $15.00, making a total of $91.30 for that year.

For the Session of the Council in July, 1908, I received $100.00, the daily allowance having been increased by By-law from $15.00 a day to $20.00. In the autumn of that year there was a Special Meeting lasting three days, for which I received $60.00, and I received $15.00 for a Committee Meeting, making a total for 1908 of $175.00.

For the Session of 1909, July, the Finance Committee recommended that the Sessional Indemnity be a straight $120.00, together with the usual mileage rate and travelling days in addition (see page 332, Announcement for 1909-10). I therefore received $120.00 for that July Session, and for a Special Session in December, 1909, which lasted three and a half days, I received $70.00, making a total for that year of $190.00.

I think it most desirable that all the detailed expenditure of the Council should be published, and I hope that the President of the Council will see his way clear to accept your offer to print it without cost to the Council if the Council feels that it is too expensive an undertaking for itself.

Yours faithfully,

F. N. G. STARR.

Toronto, May 3rd, 1910.

The Managing Editor,

CANADIAN JOURNAL OF MEDICINE AND SURGERY,
Toronto:

SIR,—The President of the College of Physicians and Surgeons complains of your editorial calling attention to the increasing expenditure of the Medical Council. He complains that your totals are incorrect, because you included the stenographer. I think it was magnanimous upon your part to include the stenographer.

Your editorial and Doctor Hardy's reply impelled me to look up my Council Announcement, and regarding that Special Educational Session that the Doctor speaks of as lasting three days, I find the cost was $2,704.30. I find, too, that twenty-eight members attended that Session. Upon inquiry I find that members of Council receive $20.00 a day, so that each member is entitled to $60.00 for that Special Session. Twenty-eight members at $60.00 means a cost of $1,680.00 to the College. Where did the balance of $1,024.30 go?

Can the President answer?

Can the Treasurer answer?

Can the Registrar answer?

Can the Auditor answer?

Can the Chairman of the Finance Committee answer? (The President claims that he safeguards Council expenditure.)

Can some members of the Council *tell where* that Thousand odd dollars *did* go?

PRACTITIONER.

Obituary

DEATH OF DR. JOHN D. WILSON OF LONDON, ONT.

It was with great regret that the medical profession learned from the daily press that Dr. John D. Wilson, one of the best known physicians in Western Ontario, died at his home in London on the morning of May 16th. Dr. Wilson had battled for nearly five weeks with a severe attack of septic poisoning, contracted while operating on the tonsils of a little girl. Notwithstanding the fact that everything known to medical science was done for him, the doctor passed peacefully away on the date mentioned. Dr. Wilson's death means that Ontario has lost one of its scientific physicians and his patients a very dear friend. We take this opportunity of extending heartfelt sympathy to his family.

News of the Month

A LARGE DEPUTATION OF MEDICAL MEN WAIT UPON THE BOARD OF CONTROL

PERHAPS the largest deputation of physicians that has ever waited upon the Board of Control did so on Tuesday, May 17th. On that date nearly two hundred medical men waited upon the Acting Mayor and Board of Control urging the appointment of Dr. John Amyot to the position of Medical Health Officer for the City of Toronto. It is perhaps safe to say that the consensus of opinion throughout the profession, both in Toronto and elsewhere, is that Dr. Amyot is undoubtedly the man who should receive this important appointment. The doctor's scientific and executive abilities were urged before the Board of Control by such speakers as Dr. Alexander McPhedran, Dr. A. A. MacDonald, Dr. R. A. Reeve, Mr. Irving H. Cameron and Dr. J. J. MacKenzie. We trust that even ere our June issue appears this appointment will be made.

THE ACADEMY OF MEDICINE ELECTIONS

THE annual meeting of The Academy of Medicine, Toronto, took place at No. 9 Queen's Park on Tuesday, May 3rd. There was a splendid attendance of Fellows, and the meeting was eminently satisfactory. In the absence from the city of Dr. A. McPhedran, the retiring President, Vice-President Dr. A. A. MacDonald took the chair, and had on his left the retiring Honorary Secretary, Dr. H. J. Hamilton. After the minutes of the last annual meeting had been duly read and adopted, the reports of the different committees were put in, each one receiving careful attention. These reports showed The Academy to be in a splendid condition, especially that of the retiring Honorary Treasurer, Dr. D. J. Gibb Wishart.

It is with great satisfaction that we find The Academy to be on the upward trend, especially as to the steady increase in membership and interest taken in its different sections. We take this opportunity of congratulating the different committees upon their work during the year now closed. Perhaps the greatest interest was taken in the report of the Nomination Committee, their slate being adopted throughout with one exception, that of Honorary Treasurer. Dr. D. J. Gibb Wishart decided to retire from that office, feeling that the time was opportune for so doing and desiring to give someone else a chance of occupying that important position. Dr. W. A. Young was elected to succeed Dr. Wishart. The following is the list of those who will occupy office for the ensuing year:

President.—Dr. A. A. MacDonald.

Vice-President.—Dr. N. A. Powell.

Honorary Secretary.—Dr. Harley Smith.

Honorary Treasurer.—Dr. W. A. Young.

Council.—Dr. J. F. W. Ross, Dr. R. A. Reeve, Dr. H. J. Hamilton, Dr. W. H. B. Aikins, Dr. H. B. Anderson, Dr. E. E. King, Dr. J. M. Cotton, Dr. D. J. Gibb Wishart.

ANNALS OF MEDICAL PRACTICE PURCHASED BY THE NEW ENGLAND MEDICAL JOURNAL

The New England Medical Monthly, for twenty-nine years edited and published by Dr. William C. Wile, of Danbury, Conn., has been purchased by the Annals Publishing Company, of Boston, and will be combined with the *Annals of Medical Practice.*

The New England Medical Monthly, incorporating the *Annals of Medical Practice,* thus becomes the most representative medical monthly publication with the largest circulation in New England.

Dr. Francis D. Donoghue, formerly editor of the *Annals of Medical Practice,* will continue in charge of the consolidated journals.

BOOK REVIEWS

The Practice of Osteopathy. Its practical application to the various diseases of the human body. Illustrated with 108 half tone engravings. By CHAS. H. MURRAY, A.B., B.D., D.O., Author of Genuine Osteopathy, The Osteopathic Truth, Practical Health Hints, and The Successful Promotion of Genuine Osteopathy. All for the Osteopathic Profession. The Elgin Osteopathic Publishing Company, Elgin, Ill. 1909.

That ninety-nine per cent. of so-called Osteopaths deserve the reputation of being quacks, there is little or no question. That, however, does not mean that all of those who practice, what is known as, Osteopathy are in that class. There are undoubtedly certain conditions which can be benefited by osteopathic treatment (if in proper hands), and those conditions the author of this book calls attention to. What a pity that the treatment has fallen, in the very large majority of instances, into the hands of such an ignorant class of people, who care for naught but the shekels.

Mr. Murray's book has many good features and can be commended to medical practitioners as containing a lot of material that should prove interesting. The book is fully illustrated.

Emergency Surgery. For the General Practitioner. By JOHN W. SLUSS, A.M., M.D., Professor of Anatomy, Indiana University School of Medicine; Formerly Professor of Anatomy and Clinical Surgery, Medical College of Indiana; Surgeon to the Indianapolis City Hospital; Surgeon to the City Dispensary; Member of the National Association of Military Surgeons. Second edition, revised and enlarged with 605 illustrations, some of which are printed in colors. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1910.

Sluss' Emergency Surgery has evidently found a place for itself among medical readers, as it is only a short time since we

were favored with the first edition. Emergency Surgery is a handsomely bound, small-sized book of seven hundred odd pages, gotten out by the publishers in first-class style. The book is divided in all into twenty-seven chapters and covers in a fairly complete manner for a small volume Surgery as it is dealt with in the emergency operating room. The book is written in such a way that the general practitioner can pick it up at a moment's notice, and it should undoubtedly serve as a guide to him in a time of uncertainty.

We find that a new chapter on the General Technic of Laparotomy has been added to the second edition, and the subject has been dealt with most carefully and at some length. We notice also that Spinal Anesthesia has been described in detail. The illustrations are capital.

Functional Nervous Disorders in Childhood. By LEONARD G. GUTHRIE, M.A., M.D., F.R.C.P.; Senior Physician to Paddington Green Children's Hospital, etc. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E.C.

"The object of this book is duly set forth in the introductory chapters. In brief, it is to emphasize the truism that the neurotic child is the father of the neurasthenic adult. Many nervous and other ailments are the outcome of neurotic or emotional temperaments, and all are aggravated thereby. It is held that early recognition of these simple facts by medical men may help to lessen the prevalence of neurasthenia in the rising generation." These are the opening sentences of the preface to this little work. We can heartily endorse the author's words, and his efforts have been successful. No work on pediatrics goes into the functional disturbances of childhood a tithe so deeply, nor puts matters so clearly and helpfully as Dr. Guthrie. How frequently are we at our wits' end to treat cases of neurotic children! Here we get invaluable hints on subjects merely touched on in systems and larger handbooks—Disorders of Sleep, Moral Failings, Enuresis, Cyclical Vomiting, Epilepsy, Chorea—the ties of many other functional nerve strains, taken up, discussed, and treatment suggested, in a masterful, satisfying manner. The little book is very cheap, and if purchased from the Canada Law

Book Company, 32-34 Toronto Street, 40 per cent. discount is allowed. A. B.

Spondylotherapy. Albert Abrams, A.M., M.D., F.R.M.F. Published by The Philopolis Press, San Francisco, Cal.

This is a very strange book. The author himself says it is really a pioneer effort. The burden of its story is that spinal reflexes are all-pervasive and that wonderful influences may be called into exercise by various forces brought to bear upon the spine.

There is brought together by compilation an aggregation of statements showing an entire absence of discrimination and balanced judgment.

There is much in the book to stimulate thought, and it would be safe in the hands of a man of experience, but would be an unsafe guide to the inexperienced or the routinist.

From many sources is gathered an *olla podrida*. Much of it is good and much of it not only useless but dangerous; moreover, it is jumbled together without reason, plan or system.

B. E. M.

Claims Arising from Results of Personal Injuries. The relation injury bears to disease and disease to injury. A treatise showing how personal injuries may affect various diseases, and how certain diseases may add to claims for accidents by protracting recovery. By W. Edward Magruder, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons; Visiting Physician Mercy Hospital and Bay View Asylum; Medical Examiner and Adjuster for Life, Accident, Health and Liability Insurance Companies, Baltimore, Md. Price, $2.50. The Spectator Company, 135 William Street, New York. Chicago office: 159 La Salle Street.

This book is one that will be found particularly useful to Medical men interested in Insurance work. There have been quite a number of alterations of recent months to the Act dealing with the subject of Workmen's Compensation, a subject which has also been dealt with recently in both England and Germany. This book comprises in all over two hundred pages, and is divided into thirty chapters. Some of the subjects dealt with

are: "Pneumonia and Its Complications," "Traumatic Tuberculosis," "Traumatic Appendicitis," "Diseases of the Kidney following Accidental Injury," "Traumatic Epilepsy," "Traumatic Apoplexy," "Traumatic Meningitis," "Traumatic Insanity," "Traumatic Heart Disease," "Spinal Injuries and Associated Diseases," "Some of the Paralyses Associated with Injuries," "Some Nerve Injuries," "Traumatic Neuroses," and "Hernia in its Relation to Accidental Injury."

We can commend Dr. Magruder's work to our readers, it being well worth the price charged by the publishers, namely, $2.50. W. A. Y.

Modern Surgery: General and Operative. By J. Chalmers DaCosta, M.D., Professor of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. Sixth Edition, greatly enlarged. Octavo of 1,502 pages, with 966 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $5.50 net; half-morocco, $7.00 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

DaCosta is rapidly approaching the two-volume series. The fifth edition contained 1,283 pages, the present 1,502.

Among some of the new work is that on Arteriorraphy, founded on the investigations of Murphy, Carrel and Matas; Crile's arterio-venous anastomosis for effecting transfusion of blood; Brewer's tubes for transfusion; the use of Halstead's aluminum bands for aneurism, etc. Bier's treatment has a place, as has also some of the new work on vaccines.

The new work on the "operative treatment of recent fractures" is somewhat bold for an author who has formerly produced a text-book, and to the author we would say, All honor for having the courage of his convictions, for we know some surgeons who constantly *knock the method* by word of mouth and yet frequently practise it. It is a forward step when the author says, "All compound fractures require operation," for to us it does seem absurd to risk a deformity when the accident has already shown us the way to secure an anatomically perfect result. We shall expect that in the next edition the author will go further and advocate operation in all fractures of the shaft of the femur and in many others.

The work on Hare Lip and Cleft Palate still needs some amendment. Why should a mother be compelled to gaze at her babe with an uncomplicated hare lip daily and hourly for from three to six months when the lip might be repaired within an hour after birth, and be all ready for nursing a few days after the milk comes into the breasts? Why should a child struggle to learn to talk with a cleft palate until it is two years old, when it might be learning to speak with a sound palate as soon as it begins to coo and prattle? F. N. G. S.

Myomata of the Uterus. By HOWARD A. KELLY, M.D., Professor of Gynæcologic Surgery at Johns Hopkins University, and THOMAS S. CULLEN, M.B., Associate in Gynæcology at Johns Hopkins University. Large 8vo.; 700 pages, with 388 superb illustrations by August Horn and Herman Becker. 1909. W. B. Saunders Company: New York and London. Toronto: J. F. Hartz Co., Limited.

This regal volume is the outcome of a study of 1674 cases of uterine myomata submitted to operation by its author between the opening of Johns Hopkins Hospital, in 1889, and January 1st, 1909. In the series every possible variety found in this class of tumor is represented. Every complication and degeneration illustrated, and the methods of treatment as well as the results of treatment are fully made known. With such a wealth of material at their disposal, the authors have thought best to leave to others a study of the literature of the subject. The evolution of modern technique in the operative procedure has been taken up so recently and in such a comprehensive and masterly manner by Dr. Chas. P. Noble that the authors content themselves with describing only such methods as they have personally made use of. Incidentally the very large part taken by Dr. Kelly in simplifying these procedures and in lessening the dangers of operation becomes an outstanding feature. The deaths are given in full on the principle that more can be learned from failures than from successes. In the earlier periods the mortality reached 5 or 6 per cent., but in the last 300 operations it fell below 1 per cent. To earlier diagnoses and surgical relief, as well as increased experience and improved technique, must be accorded the credit of this brilliant result. With few exceptions, the illustrations are original. To say that

they are up to the standard established by Max Brödel in preparation, and by the W. B. Saunders Company in reproduction, will convey to every physician an idea of their beauty, accuracy and clearness. Nothing finer has been seen by this reviewer. Canadian practitioners will note with pleasure the graceful dedication of the work to the memory of Dr. L. M. Sweetnam, of Toronto. N. A. P.

Diseases of the Nose. By Ernest B. Waggett, M.A., M.B. (Cantab). Surgeon to the Throat and Ear Department of the Charing Cross Hospital; Surgeon, London Throat Hospital, and Throat and Ear Department, Great Northern Central Hospital. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Sq., E.C. This book can be procured from the Canada Law Book Company, 32-4 Toronto St., Toronto, at 40 per cent. discount.

It has been a great pleasure to read this book of the Oxford Medical Series. The author says the book was intended to be read, as it was written, rapidly, from cover to cover. While the style of the author admits this rapid reading, there is altogether too much valuable matter in it to permit such rapid reading without serious loss. The chapters devoted to Adenoids and the Nasal Septum are particularly well written. The same may be said regarding the Accessory Nasal Sinuses. There are 89 illustrations in the book, the majority drawn by the author from nature expressly to explain the text. This is one of the best of the small books dealing with the Nose, in fact we know of no book in which diseases of the nose are more fully or completely set forth. P. G. G.

Heart Disease and Thoracic Aneurysm. By L. J. Poynton, M.D., F.R C.P. (Lond.), Assistant Physician to University College Hospital, and Physician to Out-patients, the Hospital for Sick Children. Great Ormond, etc., etc. London: Henry Frowde and Hodder & Stoughton. Toronto: The Canadian Law Book Company, 32-34 Toronto St., at 40 per cent. discount. 1907.

Dr. Poynton is so well known by his writings on the bacteriology of acute rheumatism that a work from him on heart

disease and aneurysm is read with unusual interest. This little book of some 300 pages, as one might expect, deals with the subject from both pathological and clinical standpoints in a very concise, practical and up-to-date manner. The author states that the diplococcus rheumaticus, described by himself and Paine, is the infective agent in both simple and ulcerative endocarditis, the tonsil being the common port of entry. While all may not yet be prepared to accept the author's claim as fully established, there is no doubt a growing disposition in favor of his views.

The book is of convenient size, and is worthy of a place in the busy physician's library. H. B. A.

Diseases of the Larynx. By HAROLD BARWELL, M.B., London, F.R.C.S., Eng.; Surgeon for Diseases of the Throat, St. George's Hospital; Laryngologist Mount Vernon Hospital for Diseases of the Chest; Consulting Surgeon for Throat and Ear Diseases, Cripples' Home for Girls; Consulting Laryngologist, National Association for the Establishment and Maintenance of Sanitaria for Workers. London: Henry Frowde, Oxford University; Hodder & Stoughton, Warwick Sq., E.C. This book can be procured from the Canada Law Book Company, 32-4 Toronto St., Toronto, at 40 per cent. discount.

This is another one of the Oxford Medical Manuals which should appeal strongly to the practitioner and student who wish to have diseases of the larynx plainly and concisely under review. This is a splendid little book and one which should be very popular. The illustrations are also exceedingly well chosen.

P. G. G.

BACTERIOLOGICALLY CLEAN MILK*

The subject of a pure milk supply, especially for the use of the sick, is one of the utmost importance. Since the appointment by the Academy of Medicine, Toronto, of a Milk Commission to go into the subject of Toronto's milk supply this topic has been brought quite prominently under the attention of the public generally.

That a large percentage of cases of sickness in Toronto, during the past decade, have been due to nothing more or less than the impure milk that has been delivered to the citizens generally there is no question. The list of such cases is always largely increased during the warm weather, on which we are now entering, so that it is felt that medical practitioners will be keenly interested at this particular season in knowing what is being done by at least one large city dairy in their attempt to supply the medical profession with a clean, pure milk. Erindale Farm was the first to receive the seal of the Academy of Medicine for the purity of their milk. Messrs. Price & Sons, Limited, heralded with pleasure the Academy of Medicine Milk Commission and expressed their willingness to immediately live up to any regulations that might be enforced. This firm have always expressed a keen desire to supply milk that will be found as nearly as possible free from all bacteria, and, judging from the recent reports they have received from the Commission, their efforts have met with success, one of the recent analyses made showing that Price's milk contains less than five hundred bacteria to the c.c. This condition of affairs will undoubtedly redound to their credit and be the means of instilling the greatest confidence on the part of the public in their product.

Judging from the Commission's requirements being lived up to by Erindale Farm and the fact that Messrs. Price & Son are receiving every month certificates of the most favorable character, goes to show that they are trying to conduct their dairy on truly scientific principles.

* Publisher's Department.

R
11
C38
v.27

The Canadian journal of medicine and surgery

1910

Biological
& Medical
Serials

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

STORAGE